

RICE UNIVERSITY

TIMES PAST -- TIMES PRESENT:

The Midwife

by

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ABSTRACT

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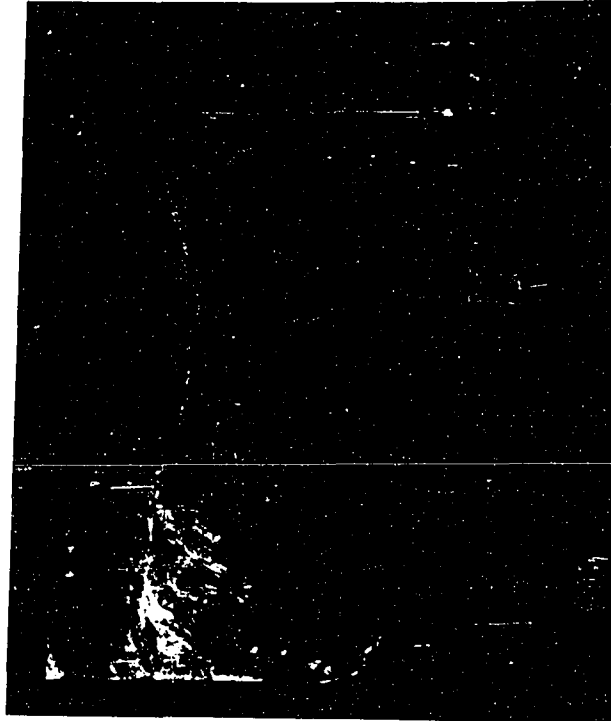
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Midwifery has re-emerged as a birthing system and women are again seeking midwives as their birth attendants. This pluralization of the U.S. medical system and its birthing system is on one level of interpretation is attributable to some primarily middle class women's and couples' dissatisfaction with hospital maternity care and with physicians' activist attitude and interventionist approach to child birth. The practice of lay or independent midwifery began to emerge in the late 1960's, in conjunction with, and as a response to, these women's demands for unmedicated birth experiences. It is argued that these women's dissatisfactions with medicalized birth and the lay midwife's alternative definition of and approach to birth are expressions of the more generalized dissatisfaction with the institutions of modernity, the materialistic explanation of science, and the rational solutions of technology. Consciously or unconsciously, the women who choose and the lay midwives who attend their alternative births are, by their decisions and actions, joining a larger social discourse which involves not only a rethinking of the efficacy of obstetrics as a total system for doing birth and the deconstruction of the institutions and practice of technological birth but a rethinking of the mechanistic worldview and of the Enlightenment enterprise of reconstructing society to conform with

the principles of natural law and social relationships to conform with the theory of complementary gender relationships. The practice of midwifery was progressively taken over by men as the occupations were professionalized; but it was the elimination of the dualism in this society's social roles and interpersonal relationships, that disqualified the midwife as a birth attendant. The re-emergence of the midwife is not only associated with the deconstruction of the mechanistic worldview but the emergence of alternatives to the complementary gender relationships of modernity. The lay midwife's solution is to return to the dualistic roles characteristic of colonial America's traditional medical relationships. The nurse-midwife, by education and experience, works and thinks in such a way that the categories which characterize the particular genders and their respective realm of the caring and curing are harmonized rather than dichotomized.

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Original painting
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Introduction

The Study

The intent of this study was to explore the re-emergence of midwifery as a birthing system and to evaluate the significance of women again seeking midwives as their birthing attendants. The re-emergence of midwifery and midwives became evident to me in the early 1980's while I was supervising the community health clinical experiences of nursing students from one of Houston's university nursing programs. Among the many clients of the city and county health departments with whom my students and I had contact, there emerged a small group of women who were coming to the public health clinics for their prenatal care but were not, as expected, delivering at the county hospital or one of the other local hospitals. Unbeknown to the clinical personnel, these women had planned and, in fact, had home births. They had arranged for their births to be attended by a lay-midwife, a new type of midwife.

About one year later, the extent of the phenomenon of lay midwife-attended homebirth became increasingly clear as the number of referrals for state mandated homebirth follow-up visits by a public health nurse increased significantly. Notably, the majority of these births had been attended by women who called themselves midwives or lay midwives. Moreover, the parents' demographic information recorded on the

accompanying copy of the infants' birth certificates was "atypical." The new midwives were not "grannies" and their clients were, like themselves, most often white, middle-class, married, and often had at least some college education if not a college degree. More significantly, these women and couples were not from Houston's ethnic or racial minorities; they had geographical and financial access to a large selection of well trained obstetricians and to a variety of modern hospitals with "up-to-date" maternity units and services.

By selecting a midwife and a homebirth, however, these women and their partners were obviously rejecting these hospitals and obstetricians. Initially, the following three questions arose:

1. Why? What had caused these women to decide to have a midwife-attended birth?
2. Who were these lay midwives? What did they know about birth and delivering babies? Were they competent? Was homebirth safe?
3. What does it mean when women reject the birthing patterns of their mothers and grandmothers and seek alternatives to the birthing facilities, technologies, and attendants which were legitimized by the society's biomedical institutions and provided by a hierarchy of professionalized medical practitioners?

In order to answer these questions, I talked with women and sometimes their husbands about their decision to have an alternative birth experience. Of particular

interest was how they came to choose a midwife rather than a physician; and then, how they found and decided upon a particular midwife. At the same time I was talking with midwives - both lay midwives and nurse-midwives - I was particularly interested in their stories, and attempted to listen carefully to their experiences with birth, and to their attitudes toward pregnancy and birth. What was it that made a midwife-attended birth different from a physician-attended birth? How did the site of birth and/or the choice of birthing attendant change a woman's birth experience? I was also interested in what midwives considered a "normal" or "natural" birth experience, and how they managed complications if they arose. Finally, there was an attempt, largely through the analysis of the historical record to identify larger social cultural themes that might explain why an ancient practitioner and traditional system of birthing that appeared, only a few years earlier, to have been effectively relegated to the archives and museums of medical history was now re-emerging to challenge scientific medicine's definition of birth and the obstetricians handling of the event.

The Unique Position of the Investigator

As the study evolved, it became increasingly clear that I was in a unique position to investigate the re-emergence of midwifery. As a university educated woman, a wife, a mother, and a nurse, I not only had an insider's perspective of American middle-class culture but of the culture of biomedicine. As a nursing faculty, I had an easy, uncontrived access to a variety of biomedical facilities and community agencies. I was able to

observe the changing configurations of hospital maternity suites and services, to observe the influences of midwife attended homebirths on middle-class women. Often I was able to engage in "shop-talk" with the midwives and in "over-coffee talk" with their clientel. However by pursuing the study of cultural anthropology, rather than further specialization in one of nursing or biomedicine's recognized disciplines, I became at least cognitively, somewhat of an outsider. By utilizing an alternative set of frameworks, I was able to hear, to see, and to analyze here-to-fore familiar issues, environments, relationships, and situations from another perspective which not only revealed new confirmation about women and birthing but about how birthing systems articulate and give expression of the society's social structures and concepts of ultimate reality.

American Women's Changing Patterns of Birth

Most, in fact, well over 90% of the childbearing women in the United States, continue to view their pregnancies and childbirth as medical events. Like their mothers and grandmothers, these women continue to have their bodies and pregnancies scrutinized by physician-obstetricians, to go to hospitals to have the progression of their labors monitored by the latest innovations in medical technology and managed rationally by a team of scientifically trained medical persons, and to have their babies delivered by a physician in the surgical environment of the stainless steel, sterile delivery room. Recent technological advances have made it possible for physicians to know more about how the

fetus is developing as a woman's pregnancy progresses (i.e., via ultrasound, amniocentesis) and how a woman's labor affects the unborn child (i.e., fetal monitoring, fetal blood gases) (McBride, 1982; Brody and Thompson, 1981; Rapp, 1988; Rosenblatt, 1989; Michaelson and Alvin, 1988). The industrial metaphors of production and quality control, as well as institutional models of the factory and the assembly line have simultaneously justified the obstetricians' refinement and elaboration of a technocratic model of birth and conditioned women to accept obstetrical medicine's new goal of producing the 'perfect' baby and new demands to control women's behaviors during pregnancy and to utilize intrusive measures to know about and ensure the well being of the fetus (Davis-Floyd, 1988; 1992; Rapp, 1988; Rothman, 1988; Wertz and Wertz, 1989). As a result, women have been rendered virtually powerless to make decisions about or to participate meaningfully in their own birth experiences. Their birth stories, as artist Judy Chicago (1985) observed in her discussion of The Birth Project, were, more often than not, individualized accounts of modern medicine's successes in utilizing the truths of science and the tools of technology to overcome the dangers inherent in the uncertain process and the possibility of unfortunated and defective outcomes.

By 1980, however, there was undeniable evidence that medicalized birth, modern America's biomedical definition of the event, the practice of obstetrical medicine, and its institutional system of maternity care were under attack. For the first time in over 100 years, the numbers of midwife attended births and home births among America' white, urban, middle class women increased while continuing to decline among this society's

socially disadvantaged and among its racial and ethnic minorities (O'Connor, 1993; Ventura, et al., 1995). By Choosing their home rather than the hospital as the place for birth and a midwife rather than a physician as their birth attendant, these women are, according to Jordan (1980) "... engaged in what might be seen as a wholesale reformulation of the medical model of birth." (p.86) Significantly, birth alternatives first arose outside America's biomedical institutions and its obstetrical system for doing birth. Therefore it behooves one to ask, not only; What does it mean when women reject the birthing patterns of their mothers and grandmothers and withdraw from this society's established system of maternity care? But, how do changes in women's beliefs about birth and in their birthing preferences articulate with and give expression to contemporary adjustments and perturbations in this society's fundamental social institutions and cultural themes?

Individually and collectively, a small but significant number of primarily white, urban, middle-class women have concluded that pregnancy and childbirth are normal, non-pathological processes which entail additional health considerations but are not inherently dangerous, or best framed as medical conditions or events. In their view, many routine obstetrical interventions (i.e., use of medication to reduce the pain of labor or to augment labor, use of forceps, fetal monitoring) intended to mitigate the discomforts and dangers of childbirth were often the cause of iatrogenic diseases which then justified, if not required additional obstetrical interventions (McBride, 1982; Brody and Thompson, 1981; Rosenblatt, 1985; Cohen and Estner, 1983; Davis-Floyd, 1992).

Frustrated by physicians' view of natural childbirth as a woman being "... awake to see her baby being born through sterile drapes..." (Rothman, 1981, p.76), by the biomedical establishment's crisis orientation toward birth and continued insistence on controlling women's birth experiences and manipulating their birth processes according to standardized criteria, and by rigidly enforced hospital policies and routines which facilitated institutional efficiency and obstetrical interventions rather than family relationships and the non-technological approaches to coping with the physical demands of labor, these women began to move birth out of the hospital and into the home (O'Connor, 1993; Michaelson, 1988; Rothman, 1981; 1988). Whether their motivations for an alternative birth experience were motivated by traditional values of family relationships and self reliance or were more consistent with the feminist agenda of women's right to control their own bodies and lives, these women no longer believed that it was possible to either convince physicians to adopt the non-interventionistic attitudes and techniques that had been advocated by the proponents of natural (Dick-Reed, Lamaze) or prepared (Bradley) childbirth or humanize biomedicine's institutional maternity care. Supported by their husbands or partners, these women reasoned that only by controlling the place of birth could they be equal participants in their own birth experiences and would they be able to have the type of birth experiences they envisioned for themselves and their families (Rothman, 1977; 1981; 1988; Cobb, 1981; Michaelson, 1986; Hazell, 1975; DeVries, 1980).

As a professional group, physicians were unwilling to accept these women's and couple's right to make their own decisions about how and where their children would be born or to provide prenatal, intrapartum, or well-child care for women who planned homebirths. Individually and collectively, physicians adopted the position that homebirths were categorically unsafe and unconscionable, and labeled women and couples who chose to have homebirths as "kooks" and "hippies", part of a lunatic fringe or members of the counter culture who were irresponsibly acting out their emotional problems or social deviancy and were exposing their unborn children to "inter-utero child abuse" (DeVries, 1980; Arms, 1975; Cobb, 1981). Through their local and national medical societies and specialty organizations, such as the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics, physicians took steps to control the emerging phenomenon of homebirth by tightening legal definitions of who could be authorized to deliver babies and by intimidating would be participants with threats of legal or professional repercussions (Mehl, et.al, 1980; Ventre, 1976; Ehrlich, 1976; Weitz and Sullivan, 1985; Mills, 1976).

Unable to find physicians who were willing to attend their homebirths, some couples began to prepare themselves to manage their own homebirths, others sought assistance from women and couples who had had a homebirth or had assisted with another's homebirths (Ventre, 1978; Reid, 1989; Gaskin, 1978). By the late 1960's, women were again preparing themselves to assume the responsibility of attending the births of their friends and neighbors. More radical factions of the prepared or natural

childbirth movement evolved into the homebirth movement. The new role of the lay-midwife began to emerge as women, particularly those who had had or had attended a homebirth or were experienced childbirth educators, drew on remembrances of colonial childbirth and on the contemporary practice of midwifery in European countries (Holland, Great Britain) and began to organize and to prepare themselves through self study and apprenticeship to practice independently as birth attendants (Butter and Kay, 1990; Ventre, 1978; Jordan, 1980; Gaskin, 1978; Mills, 1976; Reid, 1989). These new lay midwives, like the women whose births they attended, were typically well educated products of this society's dominant middle classes and shared their clients wellness orientation and holistic approach to pregnancy and childbirth (Butter and Kay, 1990; Ventre, 1978; Reid, 1989; Weitz and Sullivan, 1984; O'Connor, 1993). They attempted to form a "therapeutic alliance" with the childbearing woman and her family in order to provide supportive advice and assistance and expert monitoring so that the parents could make informed choices and the parturient woman could cope effectively with the various sensations and events as her labor progressed towards birth (O'Connor, 1993; Gilgolf, 1989; Richards, 1987).

By the mid 1980's, social scientists had documented the 'rebirth' of homebirth and the 're-emergence' of the midwife and the practice of midwifery (Cobb, 1981; Hazell, 1975; DeVries, 1980; Ehrlich, 1976; Bauwens and Anderson, 1978). Popular magazines and books, newspapers and radio and television talk shows were presenting a midwife attended homebirth as an alternative to hospitals and physicians (Rothman, 1981).

Attempts of the biomedical establishment to represent homebirth as unsafe and the new lay-midwife as a modern day 'Sari Gump', an uneducated, unskilled practitioner who placed the lives of unsuspecting mothers and their infants in jeopardy, were, by in large, refuted by studies which strongly suggested that planned homebirths attended by lay-midwives presented no greater risks for healthy women with uncomplicated pregnancies than physician attended hospital deliveries (Mehl, et al, 1975; Mehl, et.al, 1980; Hinds, et.al, 1985; Durand, 1992). Other investigations were, in fact, beginning to suggest that so long as women's pregnancies remained essentially normal, that they were better off with practitioners who were non-interventionistic and in birthing environments where the latest obstetrical technology and operative procedures were not readily available (Adams, 1989; Michaelson and Alvin, 1988; Brody and Thompson, 1981; Mehl, et.al., 1980).

By the mid 1980's there was evidence of the practice of lay-midwifery in all fifty states and in most Canadian provinces (Reid, 1989; Weitz and Sullivan, 1984; Butter and Kay, 1990; Throne and Hanson, 1982). In some states laws were being written or rewritten to accommodate the practice of lay-midwifery (Mitford, 1992; Butter and Kay, 1988; Bidgood-Wilson, 1992). In California, Texas, and Washington, lay-midwives were attending upwards of 5% of the births each year (Declercq, 1992; Declercq, 1993).

In order to stem the growing popularity of homebirths and to avoid the radicalization of a number of middle class women who were attempting to balance the natural with the technological and responsibility for oneself and one's pregnancy with dependence on medical authorities, hospitals, and physicians began to make

accommodations (Wertz and Wertz, 1989; Michaelson, 1988). Alternative birthing centers (ABC's) such as birthing rooms were designed as an alternative to conventional labor rooms and delivery suites and they were intended to provide women a "homey" atmosphere for natural childbirth and for family participation in the birth (DeVries, 1980; Rothman, 1981). Nurse-midwives were recruited by some hospitals with large numbers of births to relieve physicians of the time consuming burden of attending normal births and by others to attract the middle class consumers who wanted natural childbirth experiences (Gordon, 1982; Cohen and Estner, 1983a; Burst, 1983; Mitford, 1992).

Nurse-midwives, however, are not simply physician extenders, nor do they necessarily concur with physicians' medical approach to pregnancy and childbirth or with their paternalistic approach to women. Although nurse-midwives have always been part of and educated within the biomedical establishment, their beliefs about and approach to birth are more consistent with those of the new lay-midwife than those of either the physician obstetrician or the obstetrical nurse. Rather, the practice of the nurse-midwife, like the title itself suggests, is a blend of the ancient art of traditional midwifery and the modern science of obstetrics; but, unlike the practice of obstetrics, the practice of nurse-midwifery continues to give expression to the traditional belief that:

"... healthy women needed principally the support and of personal skills and birthing knowledge, supplemented when indicated by medical interventions and instruments." (Mulligan, 1976, p.231)

Emphasis on the values of cooperation, nurturing, responsibility, informed decision making, and relationships, made the practice of nurse-midwifery consistent with both an

emerging view of womanhood which celebrates her power to create life and a more traditional view of womanhood which honors women's unique contributions within the context of the family (Ginzberg, 1987; Martin, 1987; Michaelson, 1988).

Originally nurse-midwifery was conceived to provide scientific medicine to poor urban women (Maternity Center Association in New York City, 1932) and to geographically isolated and poor rural women (Frontier Nursing Service in Kentucky, 1925). When nurse-midwives began to attend births of middle class women, they not only became potential competitors for the new lay-midwife but for the physician-obstetricians as well. Unlike the physician, the nurse-midwife was prepared to attend homebirths; and unlike the lay midwife, the nurse-midwife was prepared to attend to do hospital birth and to incorporate the innovations of medical science into her practice. And, while the medical model of the physicians' control of childbirth was most directly challenged by the rebirth of homebirth and the re-emergence of an autonomous practitioner, it is the emerging alliance between middle class women and nurse-midwives which, in time, may have the most profound, widespread effects on the management of birth.

As advocates for women who are trying to negotiate the relative benefits of both medical technology and natural childbirth, the nurse-midwife, through her practice and interpretations of women's childbirth experiences, potentially defines a diverse middle ground between birth as a medical event and birth as a family or life event, thereby facilitating a wide range of possible birth experiences and the institutional expression of

more than one definition of or approach to birth. What has largely gone unnoticed is that nurse-midwifery is a different birthing system which gives rise to a different ideology about birth and therefore different birthing practices. Because the nurse-midwife practices in hospitals and in conjunction with physicians, they are, at least potentially, in a position to influence the birth experiences and routine practices of the obstetrician as well as negotiate more liberal, humane hospital routines and policies. By doing so, the nurse midwife may also be in a position to minimize the physical and psychological distress and to 'normalize' the birth experiences for a woman whose pregnancy or labor has developed complications and cannot be resolved without medical interventions, or has resulted in an unfortunate outcome (See: *Another Birth Story*, p.22).

The Significance of Change in America's System for Doing Birth

A birthing system constructs a microcosm of a particular social reality. The application of technology to the realities of reproduction and the processes of birth constitutes a ritual reenactment of the society's origin myths. The rules for the management of birth organize the physiological facts so that women's birth experiences are consistent with the culture's fundamental categorization of reality and principles of social organization (Jordan, 1980; Romalis, 1981; Michaelson, 1988; Davis-Floyd, 1992). Participation in the socially prescribed rituals of childbirth inculcates the parturient women and those who attend her with the care values of their society, and ensures the participant's continued reverence for their social institutions and the transmission of the

relevant beliefs and values to the next generation of citizens and care givers (Rothman, 1984; 1987; Oakley, 1984).

Since a society's way of doing birth is both logically consistent and socially prescribed, birthing systems are particularly resistant to change. The availability of new ideas about birth, new types of technology for conducting birth, or alternative birth practitioners, do not, in and of themselves, cause change in a society's fundamental understanding or configuration of the event (Jordan, 1980; Muecke, 1976; Sukkary, 1981). The historical record (Litoff, 1978; Ulrich, 1990; Leavitt, 1986; Oakley, 1984; Rosenberg, 1977) indicates that while the introduction of new medical ideas, technologies, and practitioners make a society's medical system more pluralistic and are selectively incorporated into existing patterns of belief and practice, fundamental beliefs about reproduction and patterns for giving and conducting birth do not change substantially without coercion unless a people begin to elaborate another concept of reality and adopt an alternative worldview (Romanuccei-Ross, 1977; Janzen, 1978; Klienman, 1978; 1980; Landry, 1974; Leslie, 1977; Geertz, 1973; Rosenberg, 1976).

Another Worldview

Biomedicine is part of our modern society; and like other scientific theories which attempt to explain natural phenomena and other technological systems which characterize modern society, the theory and practice of obstetrics depends on and is an expression of the mechanistic worldview. The metaphor of the machine which had dominated Western

culture for the past 300 years, however appears to be giving way to something else - a something which is more like an organism rather than a clock or an engine. Unlike Newton's physics which postulated an objective world composed of particles of matter which are organized into rigid hierarchical systems and moved by external forces, quantum physics, the new thermodynamics of Prigogine, as well as the Big Bang theory of creation hypothesize a more dynamic, organic-like view of the world (Merchant, 1990; Prigogine and Stengers, 1984; Capra, 1975; Tyler, 1987; Gribbin, 1993). In this emerging conception of reality, integrated wholes rather than assembled parts are the primary phenomena; order is an implicit developmental process which evolves over time rather than a manifestation brought about by an act of construction or production. In this emerging conception of a dynamic rather than a static reality, events and objects must be understood in context as a web of interdependent relationships rather than objectively as essences which can be adequately described in deterministic, linear, predictive equations.

As the mechanistic framework that underlies modernity and modern medical science has become a less certain representation of reality, the U.S. medical system has become more obviously and legitimately pluralistic (Moyers, 1993; Leslie, 1977; Naisbitt, 1982; Gevitz, 1989; The Burton Goldberg Group; 1994). Biomedical theorists began to identifying essential deficits in the biomedical model, namely the classical factor-analytic approach, although immensely productive, can never result in an understanding of the integrated whole (Engel, 1980; Shontz, 1975; Capra, 1982). Pluralistic approaches to patient care began to emerge as practitioners adopted a

philosophy of comprehensive, multidisciplinary or interdisciplinary care. Practitioners and therapies rooted in organic medical theories (homeopathy, midwifery) and traditions (folk, Ayurvedic, Chinese, Galenic) became increasingly evident in the contemporary medical market place. And, although biomedicine and the practice of obstetrics continue to dominate the U.S. medical system, these "new" organic alternatives simultaneously provide individuals a way to supplement conventional medical treatment and means for experiencing and expressing more dynamic, interconnected (ecological) ideas about themselves and their world. In addition, these alternative practitioners and therapies provide a vehicle through which holistic presuppositions about nature can be conveyed to individuals and groups.

Studying Changing Patterns of Birth

Midwifery and obstetrics are not only different means by which women give and participate in birth, they are different paradigms of birth rooted in different concepts of reality (mechanistic versus organic/dynamic worldview); and depend on different intellectual approaches (analytic versus holistic) to the study of natural and human phenomena. Hence, the therapeutic battles, which have erupted as some middle class women attempt to de-medicalize birth, are not simply medical arguments about the efficacy of different types of practitioners and their therapies, professional conflicts between different types of practitioners, or interpersonal conflicts between women and their birth attendants. Rather, these ostensibly medical debates and conflicts are chapters

in a larger social discourse which involves a rethinking of the mechanistic worldview and the deconstruction of the stories and themes which made the truths of science credible, the promise of technology believable, and the systems of modernity desirable (Culler, 1982).

What is happening to women, as they give and attend birth provides an important indication of how alternative concepts of reality are incorporated into social relationships and into women's perceptions of themselves and their experiences of defining life events. Social-cultural change impacts relationships and responsibilities as well as practitioner roles and therapies. Therefore, the relationships between birth attendants and the women they serve provide an arena in which this discourse about womanhood, nature, and social change is carried on in women's and their practitioners' discussions of child birth and in their negotiations of maternity care. Different ideas about birth are not only expressed as definitions and theories but are imbedded in the discussions of and preferences for particular medical therapies, attitudes, relationships, and practitioners. Therefore, what is happening to the practitioners of birth provides a key to contemporary changes in the cultural organization of social relationships and institutions (Landry, 1974; Goode, 1960).

The stories of midwives, and the women they attend represent this point of view (Spradley, 1979) and provide a rich source of information about the indivisible unity of women's birth experiences and the contemporary social-intellectual context for birth. Since birthing systems are not concrete entities but functional systems (Lauria, 1980) which are held together by the behaviors and the rationalizations of their participants,

significant changes depend on changes in patterns of relationships, the creation of a new type of functional system. Such changes are best detected by examining the way people talk about themselves and their experiences giving and attending birth (Whorf, 1959). The rationalizations of and explanations for their decisions provide critical insights into how women perceive themselves, think about birth, and incorporate their experiences into their lives (Vygotsky, 1934; Mead, 1934). Socially significant metaphors and networks of meaning are typically buried in women's stories; therefore, analysis of their content and of the propositional statements which comprise them can be expected to provide critical information about changes in culturally shaped understandings and shared meanings. This is particularly true when these stories and propositions are not isolated from their relevant social context and underlying conceptual framework (Tyler, 1978).

Therefore, interpretations, generalizations, and predictions can be made about the concurrent adjustments and perturbations in Western culture, U. S. society, and its system of health care by concentrating on the changing relationships, behaviors, and rhetorical arguments surrounding the definition and conduct of birth. There in lie the unique contributions of an anthropological study of the re-emergance of midwifery in the United States as an alternative to medicalized birth and to the technological management of women's lives and bodies.

Another Birth Story...

One of the defining characteristics of modern American society has been that women shared the same birth story, the story of medicalized birth. In the process of becoming modern, becoming American or more like Americans, women were expected to embrace biomedicine and its concept of and approach to child birth. The telling of stories of medicalized birth was assumed to be universally applicable, as an objective measure of progress. In fact, as women sought physicians to attend their births, preferred hospitals as the sites for birthing, and acquired access to technologies which were represented as mitigating the pain and dangers of birthing, it was thought that folk and agrarian hegemonies were giving way to the realities of industrialization and the truths of science. Ordinary individuals were represented as accepting the mechanistic models of nature, acquiring an objective attitude, and integrating rational models of measurement into the patterns of their everyday lives and thought (Leavitt, 1986; Wertz and Wertz, 1989). In the act of choosing a physician rather than a midwife, the hospital rather than the home, and technological rather than herbal or manual manipulations of birthing processes, women were participating in a discourse which not only reduced birthing to the sum of its physiological processes and anatomical structures, but reified childbearing as pregnancy and birthing as birth---the onset of labor which culminated in the event of delivery. What had been previously conceptualized as a mystical process, a significant life event and a social ritual of womanhood were not only demystified but objectified: childbearing was no longer a bio-psycho-social process but an event, one which could be characterized in

terms of measurable outcomes, apgar scores, morbidity and mortality statistics (Graham and Campbell, 1992).

As a result, fortunate outcomes, live mothers and babies, became the primary, if not, the sole measures of a "good birth"; and more recently, a "perfect baby" has become the standard by which reproductive outcomes are measured (Wertz and Wertz, 1989; Davis-Floyd, 1992; Michaelson, 1988). A women's birthing experience has become a medical experience which culminates in her hospital experience. And, in the end, that hospital experience conveys the message that the institution gives the mother her baby, and that society bestows upon her the identity and responsibility of motherhood. Inherent in such implicit and powerful messages is the modern social reality that the child ultimately belongs to the state, not the family, not the village, not the church. These messages are conveyed symbolically, and they are conveyed not only to the mother and father when the physician hands the infant to the nurse or to the pediatrician to be 'checked out' rather than to the mother, but also to the infant as he or she is placed in the hospital bassinet rather than in the mother's arms or in the parent's bed.

A symbol of society itself, the bassinet tells the baby that it belongs to society more than to its mother and that the only sure comfort, peace, and warmth in life will come ultimately not from society, and its products. The incubator, when used, intensifies this message by adding to it the additional message that machines are more reliable than mothers. The mother's womb is replaced by the womb of culture, which comfortably or uncomfortably, cradles us all. (Davis-Floyd, 1988, p.170)

The following story, however, suggests the emergence of another story, one that contradicts many of the forementioned premises of medicalized birth. What makes this story remarkable is that it not only arose from within the biomedical system and was told by a nurse-midwife, but that in conventional terms it was a story which had an "unfortunate" outcome and would not have by any accepted objective standard been judged to be or categorized a "good birth". Anna's story of Margaret Rose provides one example of what it means to change the context of birth and provides insights into other possible meaning(s) which can be ascribed to particular particular birth experiences by parturient women and by the women who attend them.

Anna, an experienced nurse-midwife, was employed by a large state university medical school and practiced as part of the medical faculty at a large private hospital. According to Anna most of her patients had private insurance which enabled them to utilize private medical institutions and many were college educated and had professional credentials themselves. This patient reportedly fit that general profile.

The Perfect Stillbirth

It was months later, and by the time Anna talked about the interuterine death of Margaret Rose, she had not only satisfied herself that the stillbirth was unforeseeable and unpreventable but had concluded that "... Margaret Rose had already lived... that her time on earth had come and gone..." Having gone over and over the events of that one day in March, Anna was convinced that even if the mother, Lisa, miraculously had been in the hospital, the outcome probably would not have been different. A baby only has about 250cc of blood, and it only takes

about 2 minutes for a hemorrhage from a placental vessel to result in death. In a very warm empathetic voice, Anna described her recollections and impressions of Melissa giving birth to Margaret Rose:

A: "they already had a name because they had an amnio--so she knew the sex--so she had a name, Margaret Rose. Both of her names were those of two of her dead (great) grandmothers, who both died in March---which I thought was pretty bizarre--"

J: "Really--makes you wonder about things---"

A: "Yhea-- It looked like Margaret Rose had already lived--that's the way it seems to me-- that she had done her thing---That her time on earth had come and gone--It was very brief but meaningful; and it was over. At the time, it didn't even seem as sad as it did days later---It really didn't-- just like---She came in she had her baby; she had a nice birth; she held her baby; she washed her baby; she had her baby for four hours; and her baby was put in the ground--- And, it was like that was the way things were suppose to be---"

According to Anna, this had been Melissa's first pregnancy and it had progressed normally and uneventfully. The first indications that there might be a problem was when Melissa called Anna about 4:00 or 5:00 in the morning. Melissa's waters had broken; and she was experiencing a lot of bleeding; and she was asking Anna about coming to the hospital. As Anna recalled the conversation:

"I told her what I tell all my people--"If your bleeding is more than a period, I think you should come. Even though she described it as clearly more--a massive amount, she didn't want to come. At the time I didn't know what it was. I don't think I had ever told anybody to come to the hospital when their water broke-- unless they wanted to come. But this was bizzare, what she was telling me. About ten minutes into the conversation, the bleeding stopped. Melissa said she thought the baby was moving."

Reportedly Melissa called Anna back about thirty minutes later. She thought the baby was still moving; she was getting some contractions and described bloody show consistent with early labor. Everything seemed fine, she did not want to come to the hospital and Anna did not insist, especially after Joan, Melissa's montrese (labor coach) said everything looked alright. Melissa's labor progressed uneventfully; about noon, she came to the hospital accompanied by Joan and her husband.

At that time. Melissa still thought that she felt the baby move, but there were no fetal heart tones. The midwife's back-up obstetrician was called in since the pregnancy and birthing was no longer "normal". The reality of an intrauterine death was confirmed and the significance of the bleeding Melissa had experienced early that morning was becoming increasingly clear. One possibility was that Margaret Rose had bled to death. The other possibility was that of an abruptio placenta and that Margaret Rose had died from lack of oxygen. According to Anna the latter was the most usual or typical cause of intrauterine death; but she protested: "I talked to her through this; I heard her description--and it was a lot; and it was gone." That is not a pattern of bleeding consistent with an abruptio placenta.

Despite the fact, Melissa had not had persistent bleeding which is characteristic of an abruption. Robert, the obstetrician, was still concerned that she would hemorrhage, that there had been or would be an abruptio placenta. Consequently, he insisted that Melissa have an IV. Anna did not agree nor think it necessary and Melissa did not want one; but Robert was insistent and in the hospital, he had the last word.

The insertion of the IV was the end of the obstetrician's active involvement in Melissa's birthing. Her labor continued to progress uneventfully; according to Anna; "She had a very nice birth, a very sweet birth." About six o'clock that evening, Anna caught Margaret Rose. When the placenta was born, it became evident that Margaret Rose had bled to death. Because of an abnormality in the small placenta or fetal circulation, when Melissa's waters broke a blood vessel tore; and the baby's blood supply was gone in minutes. Never-the-less, Robert continued to speculate that if Melissa had come to the hospital sooner, she might have had a live baby. This was a scenario that Anna rejected outright, she could not have gotten there in time.

Margaret Rose's birth was attended by Melissa's husband, Robert, the obstetrician, Joan, the montrese, and by Anna's partner, Kate. After the birth, Melissa gave her baby the herbal bath that she had planned, and then she and her baby went upstairs. After Kate and Anna talked with one of the nurses on the Gyn-floor, it was arranged for Melissa to keep her baby with her. Apparently, this was no easy task, this had never been done before and multiple rules and regulations had to be set aside and the offended sensibilities of some, particularly Melissa' mother, had to be ignored.

Melissa's mother arrived after the birth of Margaret Rose and was upset with the people and the type of care her daughter received. Reportedly she found it disgusting that labor, delivery, and postpartum had been allowed to progress "as if all was well". She could not imagine why, once it was known that the baby was dead, she was not removed by C-section. Why was her daughter not taken out of her misery? She found it unacceptable, even cruel, that her daughter was cuddling a dead baby. As a mother, she had to do what no one else would do,

take care of business and protect her daughter by removing the obvious source of her pain. At 3:00 AM, she insisted that it was time the lifeless baby be removed. A nurse carried Margaret Rose to the morgue. Anna characterized Melissa's mother's reaction:

"We were obviously putting her (daughter) through this pain---Melissa obviously needed an C-section. A lot of--not overt but a lot of subtle inuendos... Why did she want to go to midwives anyway? She hated us! She wanted to stay as far away from us as possible..."

Despite her mother's disapproval, Melissa's relationship with Anna and Kate continued after Melissa left the hospital. At Melissa's invitation, Anna and Kate attended Margaret Rose's funeral; and Anna continued to talk with Melissa from time to time as she and her husband grieved the loss of their first child.

"And, she even shared with us his grief, you know--like out of Kubler-Ross's books. He had three or four days of major trauma, crying jags; he couldn't go to work. Then, that sorta passed and they went on a nice, sweet vacation together--- She shared alot of stuff with us, which is kinda unusual."

Just prior to the time Anna recounted this story, Melissa had called Anna after she heard that Anna was expecting her first child. Melissa appeared to be doing well as Anna had predicted and she was thinking of having another baby, soon. She still wanted Anna as her midwife; she just did not want to have another baby due in March.

Interpreting the Story of Margaret Rose

When this endeavor began, the story of Margaret Rose was neither the type of story I expected to hear nor the type of story I expected to epitomize the changing context of birthing.



An unusual story even today, this story probably could not have been told a generation ago. Very simply, the critical elements, such as a midwife attending an abnormal birth in a private hospital could not have come together. In the U.S. midwifery was a discredited tradition; traditional midwifery was part of an earlier era; and nurse-midwives were few in number and relegated to a practice among the poor (Litoff, 1975; Rooks, et al., 1980). Lay-midwifery only began to emerge and develop a practice tradition in the 1960's (Reid, 1989; Ventre, 1976; 1978; Gaskin, 1978; Hazell, 1975; Cobb, 1981). After World War II, a hospital birth became universally available; homebirth became unthinkable. Hospitals were the sole domain of the physician; there was no precedent for an obstetrician to step aside to allow a midwife to manage any birth let alone one known to be abnormal. Physicians delivered babies; midwives rarely caught babies in the hospital. A stillbirth was in all cases a failure and an event from which the system and individuals involved sought to distance themselves. An imperfect baby was removed quickly in order not to further upset the mother, or in fact the nurses and doctor who attended her. Finally, describing a stillbirth as a nice or sweet birth and arranging for the mother to bathe, dress, and cuddle her lifeless child was at best in bad taste; many would have considered its very suggestion outrageous. Institutional policy and procedure would effectively prohibit a mother keeping a stillborn infant with her for over six hours. Once death had occurred, the body was to be removed to the morgue within two hours.

The interrelated themes of competence, conflict, involvement, responsibility, choice, and reasonableness which are embedded in this story not only represent a particular point of view; but also provide insights into what it means to demedicalize or humanize maternity care. The

story exemplifies how women's alternative birthing choices are changing the conventional social structures and relationships which have characterized both the practice of modern medicine and the organization of modern social and institutional relationships. Anna's relationship with Melissa extended beyond the traditional boundaries of professional involvement by attending the funeral and by informally keeping in touch through the grieving and preparation for another pregnancy. The paternalism which has characterized the modern doctor-patient relationship and the husband-wife relationship was over-shadowed by a more egalitarian mutually negotiated relationship among a network of women. In fact, the physician's insistence on an IV and Melissa's mother's need to take care of her daughter's distressful situation and get it behind her seemed in the context of Anna's account to be insensitive and misdirected. The rationality of morbidity and mortality as the criteria for a good birth did not seem to apply.

A normal or health baby was not a single criteria for a good birth experience. Although stillbirth was not a desired or desirable outcome, the birth of Margaret Rose was hardly reducible to an infant mortality statistic; many of the events surrounding this birth were normal, even healthy. In addition the rational explanation for how the intrauterine death occurred was not accepted as a total explanation. Mechanisms (how) were not substituted for the more problematic and speculative endeavor of making the experience meaningful, of explaining why it occurred, and why it happened to Melissa and Anna. The two explanations were equally important. The conventional scientific explanation (vas-previa) served not only to identify a sequel of events which resulted in Margaret Rose's intrauterine death; it also served to exculpate both Anna and Melissa. It was reasonable to conclude that the intrauterine death was not the

result of anyone's irresponsible act or failure to intervene. It was, however, the perceived relationship between Margaret Rose and her deceased (great) grandmothers that gave the events the kind of meaning which enabled Anna and Melissa to accept the undesired outcome, and incorporate their experience into the fabric of their lives rather than isolate or repress it. According to Anna, Melissa appears ready to have another baby; and she is neither attempting to replace her lost child nor approaching another pregnancy with fear and trepidation. Anna, by her own accounts, has continued to practice midwifery and to experience her own pregnancy without redefining childbirth as inherently dangerous or becoming overly cautious or concerned about the possibility of hidden pathology or untoward outcomes.

As might be expected, not everyone desires the care that midwifery offers or finds the alternative approach to birthing that makes it possible, desirable or an improvement on biomedical maternity care. The obvious protagonist and historical opponents to midwifery are biomedical practitioners, specifically obstetricians (Wertz and Wertz, 1989; Donnison, 1977; Schiebinger, 1989). In this case, however, the more obvious conflict was not between Anna, the midwife, and Robert, the obstetrician, but between Anna and Melissa's mother.

Melissa's mother represents an earlier generation, and her investment in the use of technological means to address human problems was evident. She was distressed because she lost her granddaughter; but she was also distressed because obstetrics seemed to offer solutions that would have spared her daughter and herself the pain and suffering of confronting this lifeless infant. A Cesarean section, general anesthesia, even the simple removal of the infant were all possible, yet in her mind they were being withheld causing needless suffering. Attitudes and

sensibilities differ and justify if not require different types of approaches to a situation or an event.

This study examines the stories of women who seek alternative birthing experiences, as well as two types of alternative providers, the lay midwife and the nurse midwife, and attempts to explain the impact of a changing world view on the conduct and conceptualization of birth and the midwife's participation in birthing.

Chapter I examines the practice of colonial midwifery and the institution of social childbirth in the United States. The experiences of Martha Ballard, a colonial midwife practicing in Maine from the mid eighteenth to the early nineteenth century is used as a vehicle for describing these traditions and for exploring the ideological and social structures which underwrite the traditional practice of midwifery. During her years of practice, new mechanistic views of the universe and the body began to influence the medical practices of physicians in her community, the reciprocal relationships were disrupted by migration to the cities and frontiers, and new ideas about femininity and womanhood destabilized colonial society's dualistic gender roles. Mrs. Ballard's practice of midwifery became problematic and the traditional role of midwifery began to decline.

Chapter II traces the demise of the midwife. First it explores the effects the Christian world view had on Western society's perceptions of women and the practice of midwifery, and then the effects of the adoption of the mechanistic world view on medical practice, the perception of the human body and the demystification of birth. It is argued that the professionalization of the occupations was essentially their masculinization and that the systematic elimination of

dualistic gender roles rendered the midwife obsolete. In the new social order, which incorporated the patriarchy of Christian world view and the engineering approach of the mechanistic world, the midwife was replaced by the man-midwife and ultimately the physician-obstetrician and his assistant, the nurse.

Chapter III looks first at the medicalization of birth, identifying factors and conditions which made a physician-attended hospital birth a social ideal, and then explores contemporary dissatisfactions with and concerns about the increasing use of technology to monitor and to manage women's labors, the physicians' unwillingness or inability to relinquish control of birth or to involve women/couples in decisions about the medical care they are to receive, and the physical and psychological effects of an impersonal, medically oriented hospital environment. Women discuss their experiences with medicalized birth, their motivations for choosing and their satisfactions with midwife-attended births. The effects of the physicians' crisis-oriented, interventionistic attitude and maximum-strategy approach to childbirth are explored in an attempt to evaluate the relative benefits of obstetrician-attended births and midwife-attended births.

Chapter IV examines the pluralization of the U.S. medical system and the recent evolution of a new practitioner, the lay or independent midwife. The lay midwife appears to be a response to consumer demands for control of and participation in their birthing experiences. Lay midwives' stories about caring for pregnant and parturient women reveal that they see obstetrical procedures as appropriate interventions for those rare problem pregnancies and for rare unanticipated complications which can arise during labor or delivery. "Normal" births are

considered to be outside of the medical system and are dealt with as family affairs and as normal physiological events.

Chapter V describes the nurse midwife as a post-modern phenomenon; the descriptions of nurse-midwifery practice are more consistent with the emerging ecological worldview which is based on recent representations of the cosmos as a living organism. Unlike the lay midwife who has re-established a dualistic relationship with the physician and whose primary concerns with medicine are establishing operational definitions of ordinary or normal versus extraordinary or complicated births, the nurse-midwife is prepared to practice in both realms. As both nurses and midwives, their roots are both in the practice of traditional midwifery and in modern, scientific medicine, biomedicine. From the inception of nurse-midwifery in the 1920's their practices have been an integration of the two traditions rather than an elaboration of one at the expense of the other. This integration provides the consumer yet another birthing choice, a middle ground between the physician-attended hospital delivery and the lay midwife attended home birth. Their stories about birth and the women they attend suggest a new expression of "professionalism," one in which female qualities and attributes are not necessarily subordinated to those associated with masculinity. More specifically, caring as a mode of practice is not subordinated to or abandoned to that of curing.

Chapter I: Historical Overview

Nineteenth Century Transformation of the U.S. Birthing System

Times Past

Throughout America's colonial history, midwifery was well established as America's birthing system and the midwife was American women's birth attendant. There was nothing unusual about that, midwifery was an ancient system for doing birth, the only one that most of America's colonists would ever know. Midwifery and women who performed as midwives came on the May Flower and no doubt on every other ship which brought settlers to the New World. Traditional midwifery in Colonial America was embedded in the community, a continuation of medieval village life (Merchant, 1990); and the practice of the colonial midwife continued to exemplify the Old World's organic worldview (Erickson, 1976; Berman, 1984). Hence, the practice of midwifery was still guided by the theoretical formulations of humoral (Galen) medicine and the midwives still acquired their knowledge of birth through experience, by giving birth herself and attending the births of other women (Ulrich, 1990; Wertz and Wertz, 1989). An integral part of her community's system of domestic production, the midwife's social relationships were rooted in the interdependent, egalitarian roles, and reciprocal obligations of communal life (Ulrich, 1990; 1982). Even though the midwife could be identified as an individual, typically she was part of a network of women whose

collective knowledge and experience was brought to bear on situations of birth, sickness, and death (Donegan, 1978; Ulrich, 1990).

Between 1800 and 1950, the U.S. birthing system was totally transformed; midwifery as it was practiced in Colonial America was abolished. The trends of the nineteenth century came to fruition in the twentieth century. Women's practice of midwifery was replaced by men's practice of obstetrics; and the persona and knowledge of the midwife was effectively discredited. In the process, birth passed from the hands of women to the hands of men holding instruments, moved from women's birthing rooms to hospital delivery rooms, and approached with an attitude of "active intervention" rather than "watchful expectancy". The role of women's birth attendant was no longer to assist but to improve on nature by controlling the processes of birth as well as the participants in birth.

These obvious and radical changes in the organization and control of America's birthing system have individually and collectively been attributed to a multiplicity of factors. Wertz and Wertz (1989) as well as Schotten (1987) and Leavitt (1986) emphasize the role obstetrical instruments played in giving men entry into women's birthing rooms and a role in the management of ordinary or normal births. Starr (1982) and Haller and Haller (1994) and Leavitt (1986) describe not only the growing importance and legitimacy of the medical profession but its growing role as moral and health advisors to urban women of the middle and upper classes. Most notably these women, in the early 1880's had begun to employ a man-midwife as well as or instead of a

(female) midwife to attend their births. Starr (1982) as well as Litoff (1975) also emphasize that the midwife was an important economic competitor to the physician. The significance of economic competition was also emphasized by DeClerq (1994) in his exploration of the prosecution of Hanna Porn and the enforcements of newly enacted legislation which made the practice of midwifery illegal in Massachusetts at the turn of the twentieth century. Donnison (1977) and Schiebinger (1989) suggested that midwives failure to organize themselves to represent their interests and capabilities in larger political forums left them vulnerable to physicians' and their associations' campaigns to legally define midwifery as the practice of medicine and to prosecute midwives for practicing medicine without a license.

Other, less commonly cited but equally plausible explanations for the demise of midwifery include a decline in the numbers of qualified women interested in or available to be recruited into midwifery (Ulrich, 1990; Mongeau, Smith, and Maney, 1961). Women from the middle and upper classes had begun to seek medical training as physicians in both orthodox and sectarian medical schools which would admit women (Morantz, 1977), or training in nursing in the new hospital schools of nursing which were organized after the Civil War. Finally, the decline of midwifery has also been associated with a modification in the Christian dictum that women had to suffer in childbirth and with the secular shift in attitudes which encouraged the limitation of family size (Scholten, 1977; Kobrin, 1966).

Although each of these explanations are important aspects of the story, they do not explain why, after hundreds of years, midwifery was so quickly and so successfully dismantled and the midwife was so effectively discredited and vilified. Moreover, these facts and associations do not explain why it was obstetrics which came to replace midwifery as America's system for doing birth, why a male physician would replace the (female) midwife as women's birth attendant; or why all births were moved from the home to the hospital.

For these answers, it is necessary to explore the changing context of and relationships surrounding birth as well as the changing practices and practitioners of birth. Biomedicine and its atomistic, engineering approach to sickness and sickness-like conditions such as pregnancy evolved from and gave expression to this mechanistic world view (Capra, 1982). In historic and economic terms the transition from midwife to obstetrician and the movement of birth from the home to the hospital arguably lagged behind but was consistent with the transition from a feudal to a capitalistic mode of production (Habermas, 1976), the urbanization of American society (Hays, 1972; Wiebe, 1973), and the industrialization of women's domestic production (Houghton, 1957; Schiebinger, 1988; Ulrich, 1982; Larkin, 1988). Sociologically, the physicians' unprecedented acquisition of cultural authority represents a shift in the society's prevailing norms and values. Efficiency, respectability, cleanliness, comfort, and health not only parallel the emergence of secular authority and growing preference for urban life styles (Turner, 1985; Haller and Haller, 1974; Starr, 1982), they legitimize the

requirements that men and women regulate their lives and bodies according to the clock, adhere to the doctrine of complementary sexual attributes, and avoid physical and emotional dis-ease (Lears, 1981; Schiebinger, 1988). The value of health and expectation of morality became intertwined. The origins of mental and physical ills could be attributed to physical and moral indiscretions which in turn were understood as a type of disobedience or violation of God's natural, physiological laws (Rosenberg, 1976; Haller and Haller, 1975). Physicians were portrayed as the epitome of the scientist; and modern medicines' evangelistic commitment to the elimination of physical suffering and moral evil was rooted in the new professional leaders' faith in science and utopian belief that applied science was the way to achieve material and moral progress (Houghton, 1957; Haller and Haller, 1975; Lears, 1981).

One of the consequences of these collective changes was that by the end of the nineteenth century, midwifery was no longer a socially sustainable birthing system. Midwifery belonged to another historical era, another social ethos cultural tradition. The teleological thinking and vital animistic principles which underwrote the midwife's role as nature's facilitator were no longer theoretically defensible (Merchant, 1990), or practically necessary (Keller, 1986). Symbolic of traditional knowledge and practices, midwifery came to represent an obstacle to intellectual progress and social development. Successfully characterized as an ignorant, slovenly crone whose ministrations contributed to women's childbirth agonies and tragedies (Donegan, 1978), midwives were no longer perceived as skillful, knowledgeable practitioners, nor were they esteemed as women's

preferred birth attendants. Medicalized birth was the "modern" way, the "American" way of doing birth. The rational, technically oriented management of women's bodies and births was consistent with physicians' view of themselves as professionals and scientists, and American's view of themselves and their society as modern and progressive (Hays, 1972; Weibe, 1973; Starr, 1981; Rosenberg, 1976).

Today the technology and ideology of medicalized birth are so intertwined that a discussion of one evokes images of the other. Deeply embedded in the day to day practices of giving and attending birth are a network of associations and relationships which continue to support an exaggeratedly rationalistic attitude toward life and to over-evaluate men's traditional attributes and achievements while systematically debasing women's experiential (intuitive) knowledge and trivializing women's physical capabilities, creativity, and domestic skills (Parker, 1984; Rich, 1986; Oakley, 1984; Schiebinger, 1989).

Since social evolution is a continuous, uneven process; consequently the past is ever present, influencing a society's present and future historical developments (Habermas, 1976; Turner, 1985). Contemporary obstetrical practices and relationships continue to be laced with a heavy dose of nineteenth century ideology. In order for contemporary women to change their birthing experiences it is necessary that the web associations and relationships which made medicalized birth reasonable and efficacious be unraveled and reevaluated. Therefore the initial step in exploring the meaning of contemporary dissatisfactions with medicalized birth

and in determining the significance of women's struggle to redefine birth and to construct more natural and more social birth experiences requires that the network of supportive associations are revealed. This involves another look at the transition from midwifery to obstetrics in order to more clearly identify the network of meanings embodied in the medical definition of birth and in the routine practice of obstetrics. The following interrelated aspects of that transition seem particularly significant for understanding the structural logic which underlies the characteristic associations and relationships of medicalized birth:

1. While industrialization was making domestic skills unnecessary and home industries less profitable, urbanization was changing the nature of social birth and increasing physician's role as birth attendant and as a health advisor.
2. Humoral medicine was in decline in the nineteenth century, but it was not until the twentieth century that allopathic medicine's scientific theories and biomedical practitioners clearly offered effective therapies.
3. Physicians' enhanced authority came initially from the success of "scientific" explanations as vehicles for limiting the social disruptions and making the radical changes brought about by

urbanization and industrialization comprehensible and manageable.

4. The uncritical embracing of rationality as this culture's preferred mode of thought not only changed the nature of scientific and medical inquiry but changed the way women's social roles and attributes were rationalized and the way women lived their lives and perceived their bodies.

Social Birth

Social Structures in Colonial America

The life, the work, and the Ramist logic which provided the basis for all social relationships in colonial America was rooted in the village folkways of the medieval peasant (Merchant, 1990; Ulrich, 1990). The social order was clearly and unapologetically hierarchical, modeled after the Puritan's particular interpretation of the order of creation (Morgan, 1966). Although Puritans' reformed Protestantism was radical in its proclamation of men's and women's spiritual equality, its social attitude was conservative. The God of order had proscribed not only that the creatures were subordinate to man but a whole network of dual relationships in which one party was subordinated to the other. God had ordained that men and women live together and had provided the forms, family, church, and state in order for them to do so. The freedom of

the individual lay only in the selection of which state, church, or family he or she would become a part of. In a society characterized by interdependence and inequality, it was, in fact, dangerous to live alone or to act alone (Larkin, 1988).

TABLE 1.1

Subordinated Dual Relationships

STATE	Ruler - Subject
CHURCH	Minister - Elder - Congregation
FAMILY	Husband - Wife
	Parent - Child
	Master - Servant
COMMUNITY	Physicians Midwives Nurses Attendants

Within each of the recognized institutions there were further differentiations of hierarchies within hierarchies. Puritans were not levelers; they honored numerous expressions of superiority and all of their social relationships were marked by a pattern of superiority and inferiority. It was only natural, a part of the divine order that "...old men were superior to young, educated to uneducated, rich to poor, craftsmen to common laborers, high born to low born, clever to stupid" (Morgan, 1966, p.18). Differences of age, wealth, birth, and talent, added to the richness and complexity of life, but they did not constitute the hierarchy of any particular social group. In other words, a very skillful

and talented son did not become in any way superior to his father, deference to the father was expected even if the father's abilities were less than those of the son.

Inequalities, particularly those within the family, were typically a matter of degree and circumstance. While children and servants were in many respects their parents' subjects, the relationship between the husband and the wife was different. It was expected to approach equality. Although the inequality was inherent in the husband-wife relationship -- a woman became a wife by virtue of her dependence on and her solemn vow of commitment to her husband -- the marital relationship, itself, was more often defined by socially proscribed complementary gender roles than it was by structural inequalities. As head of the family, the husband represented them in the outside world; but he was expected to incorporate his wife's opinions and interests in his decisions (Ulrich, 1982). Wives, however, were viewed as "deputy husbands", able to and expected to stand in for their husbands and represent the family if circumstances required. Although primarily responsible for managing the household and attending to the internal economy of the family, women's role as deputy husband reflected the ordinary realities of existence. Contradictory possibilities made community life possible by interconnecting "...law with sentiment, property with procreation, and gender socialization with communal obligation" (Ulrich, 1982, p.8).

Gender Roles

Typically gender roles proscribed distinct but interdependent spheres of authority and responsibility which were divided in terms of space, time, and tools (Larkin, 1988). Growing up meant progressive involvement in and responsibility for household and farm/artisan tasks. Learning to work and learning what it meant to be a man or a woman occurred simultaneously and imperceptibly in children -- "...following on' after their parents and imitating them" (Larkin, 1988, p.34). Resulting divisions between genders, however, were primarily structural rather than psychological; the pertinent issues were those of family survival and community harmony rather than the authenticity of an individual's masculinity or femininity (Ulrich, 1982; Merchant, 1990).

Typically women's work and roles circled inward from the (farm) yard to the house, to the hearth, while men's activities and roles circles outward from the yard to the barn or workshop to the fields or streets on to the world at large. The work of the household was done daily and involved nurturing husbands, children, and neighbors through the endless activities of cooking, gardening, washing, spinning, sewing, and nursing. Men's work was more seasonal and more likely to require physical force and involve the manipulation of sharp tools or heavy implements. Men and boys typically were responsible for acquiring and handling raw materials and initiating the first steps of processing. Only then were such items as flax, corn, or even firewood turned over to women and girls to be either consumed or to be transformed.

Social activity was also proscribed by gender; men had public lives, women had community lives (Ulrich, 1990). The town was part of men's space and men clearly monopolized public business which involved not only the politics of local town meetings but the importation of raw materials and goods from the West Indies and England and medical ideas from Paris, London, and Eidenberg. Medical practice was rarely a full time endeavor but intellectual white males, particularly elite males connected the town/community with the Atlantic, while women connected the community with private households. Domestic duties such as spinning, weaving, and nursing were integrated into a complex system of neighborly exchange, supplying products and services which remained in the local economy (Ulrich, 1990; Larkin, 1988).

Within this context of borrowing, sociability, and neighborly kindness were important mechanisms for establishing and maintaining the patterns of reciprocal obligations upon which survival hinged. In fact, common place notions of a good woman, a good wife, a good mother, and a good neighbor were virtually interchangeable. Mothering in early New England was not focused on any one child or even just one's own children. A woman's mothering activities and responsibilities for nurturing were extended into the community and reached into old age (Ulrich, 1990). Women's roles as nurse, midwife, grammar (teacher of young children) were in many respects simply particular expressions of a woman's obligation to support the women and children of her community as well as care for her own family. After analyzing the diary of a late eighteenth century midwife, Martha Ballard, historian L. Ulrich observed:

The structure of the diary forces one to consider midwifery in the broadest possible context, as one specialty in a larger neighborhood economy, as the most visible feature of a comprehensive and little known system of early health care, as a mechanism of social control, a strategy for family support, and a deeply personal calling. (Ulrich, 1990, p.33)

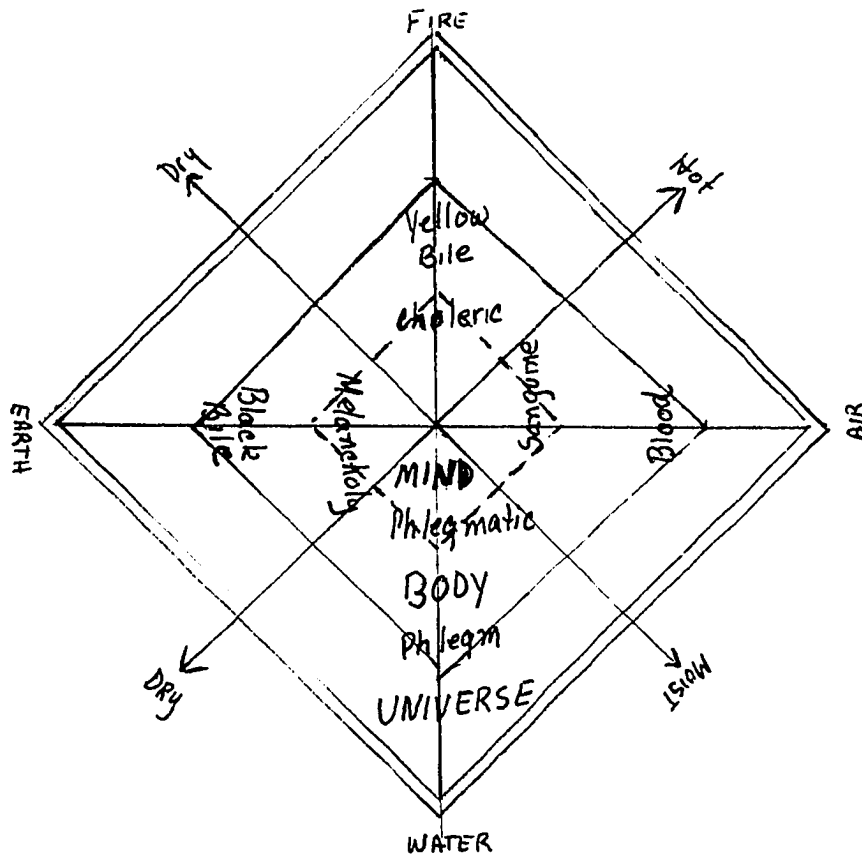
Social Medicine

At the end of the eighteenth century, the differences between male and female practitioners were more often a reflection of their gender rather than differences in either medical knowledge or particular approach to sickness. The technological simplicity of even early nineteenth century medicine meant that male doctors had little to offer that was not also available from female practitioners (Ulrich, 1990). The ancient English remedies, herbs, sympathetic medicine, astrological considerations were still part of academic practice. The ecclesiastic attitude of English medicine encouraged the incorporation of Indian and African cures (Ulrich, 1990). Moreover, it was generally accepted that nature offered solutions to its own problems and that remedies could be found in the earth, the animal world, and in the body itself.

Medical theories drawn from Galen's ancient theory of humors continued to provide all encompassing rationalizations for the diagnosis and treatment of sickness (Magner, 1992; Rosenberg, 1977; Pfiffer, 1983). Metaphorically the body was a microcosm of colonial society, a complex system of dynamic interactions which not only connected but imbedded individuals in their environment(s). Health was perceived as equilibrium or harmony; illness was synonymous with disequilibrium, a kind of discord. Treatment was intended to restore the harmony in the environment and the equilibrium or harmonious balance of the four bodily fluids - blood, phlegm, choler (yellow bile), and melancholy (black bile). Because all parts of the body were interrelated not only with each other but with their environment, treatments need not be specific to be effective. An excess of one of the humors was generalized and affected the whole person rather than only one aspect (organ, tissue, cell, etc.), therefore any treatment which would reestablish the body's equilibrium was understood to be effective (Magner, 1992). Analogy provided

TABLE 1.2

Galen's Humoral Allegory
The Small World of the Human Body and Mind



a method for speculating about the etiology of internal diseases; metaphor provided a means by which the invisible could be visualized, diagnosis could be made, and treatments could be prescribed (Miller, 1972; Rosenberg, 1977). Once such a picture was created the practitioners could then concern themselves with establishing the correct practical procedures, lancing, festering, blistering, or administration of diuretics, cathartics, narcotics, emetics, diaphoretics, which simultaneously addressed the individuals' symptoms and reaffirmed the essential order of the universe. Specifically, a laxative or cathartic treated the entire organism not simply the gastro-intestinal system. The administration of these "drugs" merged the two meanings of "physic" as knowledge of the human body and as purge or cathartic (Ulrich, 1990, p.54).

In the world of eighteenth century medicine, midwives and doctors were part of the same system; generally they recognized each others' roles and responsibilities, and they sought and achieved similar results. The performance of specific types of treatments were by-in-large a reflection of and governed by the same long standing social arrangements which structured men's and women's domestic roles and social obligations and space. Typically female practitioners specialized in the care of women and children and in the treatment of ordinary or minor illness. Tradition dictated that female practitioners call in a doctor, a physician, a surgeon, when a condition became an emergency (serious) or when physical strength or the use of instruments was required. By this time, lancets and forceps were clearly male instruments, bone setting and tooth pulling often required a man's strength. The administration of strong, dramatic therapeutics (i.e., calomel, foxglove, laudanum) was expected in the event of "serious" illness; and the physician was usually called when such extraordinary measures were indicated (Ulrich, 1990; Rosenberg, 1977; Donnison, 1977; Wyman, 1986).

The training and approach to practice by male-doctors and female-nurses were clearly different. Men practiced professional medicine, both their title and their training

set them apart from their community. Professional training, even if it were only an apprenticeship was institutional in that it was fixed in time and place and transformed the identity of the individual. The very title "doctor" distinguished these men from the masses of their community and enabled them to cultivate regional and cosmopolitan networks and join occupational associations which legitimized their medical knowledge and skills (Ulrich, 1990; Starr, 1982).

Women practiced social medicine; although known within a given community as a midwife or a nurse, such designations, however, were not so much personal titles but reference to a type of community service. And while it can be said that women learned their medical skills empirically, they really did not serve a time bounded apprenticeship like their male counterparts. Rather, their learning was social, characterized by a gradual almost imperceptible acquisition of skills and knowledge through the seemingly casual experience of women's day to day household activities which were performed in their own homes and in the homes of their neighbors (Ulrich, 1990; Leavitt, 1986).

Much of the meaning of childbirth for women was determined not by the particulars of birth per se but by what women shared with each other by virtue of their common social values of nurturance and domesticity and by their common childbearing experiences. It was through giving birth and nursing her own sick or dying family members that a woman acquired the necessary compassion to attend another woman's birth or nurse another woman's child. By attending births as part of the circle of women who surrounded and encouraged the expectant mother and by providing nursing care to

her relatives and neighbors that a woman acquired the practical knowledge necessary for brewing common (herbal) medicines from the plants she grew in her garden, for administering gargles, bandages, poultices and clisters, swaddling the dead, or for officiating at births (Ulrich, 1990).

The Colonial Midwife

Every woman was a nurse, caring for the sick was a universal female role. There were, however, a few women in each community who were more knowledgeable and more committed -- "They went farther, stayed longer, and did more than their neighbors." (Ulrich, 1990, p.62) The midwife was the most visible and most experienced person in a community of female healers who shared her perspective, her obligations, training, and labor. Although she was the best paid as well as the most knowledgeable and skillful, the midwife was always part of a network of healers upon whom she relied and from whom she derived her position and authority.

The requisites for becoming a midwife were both personal and social. In addition to the necessary personal commitment and knowledge, women had to be free from childbearing, have a reliable source of household help, and the opportunity "to perform" (Ulrich, 1990). Rarely did these factors come together for a woman until sometime after her own menopause. Only then was a woman freed from the demands of her own childbearing responsibilities. It was also about that time that she might have had daughters old enough and experienced enough to assume responsibility for the household

and to continue domestic production. Even then, the time when a woman "graduated" from assisting to officiating births was often determined by the old midwife being delayed or stepping aside, allowing another to officiate or perform (Ulrich, 1990).

Realities of Women's Childbearing

From the time of marriage (often around 20) until the time of menopause (usually in a woman's 40's) women's lives were shaped by the rhythms of their reproductive cycles. Puritan women were wives. A wife was both a "help meet" and a consort to her husband. Within the institution of marriage physical attraction, sexuality, and children were counted among God's blessings. In Colonial America reproduction was essentially uncontrolled and uncontrollable. Large families were the norm, and there is little evidence that significant attempts were made to prevent or retard conception until the end of a woman's child bearing years (Ulrich, 1982; 1990).

Once initiated, the whole cycle of pregnancy-childbirth-motherhood was understood as it was experienced -- a continuous entity rooted in God's design and manifested in women's fate (Oakley, 1984; Larkin, 1988; Ulrich, 1982). During her childbearing years, a woman had at least eight to fourteen pregnancies and was carrying or nursing a child at least 50% and often greater than 80% of the time. The first pregnancy typically occurred within the first year of marriage. Subsequent pregnancies, despite evidence of considerable variability, occurred every 20 to 30 months (Ulrich, 1990; 1982; Leavitt, 1986; Oakley, 1984).

Colonial Childbirth

In Colonial America reproduction and childbirth were social events rather than medical events; moreover they were ordinary rather than extraordinary occurrences in women's lives. Neither pregnancy or childbirth had been defined as inherently dangerous or even pathological-like. Pregnant women seemed to be afforded some special considerations, but there is little evidence that a pregnant woman was considered delicate or routinely in need of relief from her usual household responsibilities (Ulrich, 1990). Since both pregnancy and birth were recognized as "normal" biological functions, women were expected to require only minimal active assistance (Donegan, 1984; Oakley, 1984).

Although it was widely recognized that women experienced symptoms characteristic of "being pregnant", there was no conceptual differentiation of what constituted a "normal" and an "abnormal" pregnancy (Oakley, 1984; Dewees, 1826). In Dewees' classical text, A Compendious System of Midwifery, (1826), he enumerated sixteen signs which usually accompany pregnancy including the suppression of menses, nausea and vomiting, salivation, quickening, heart burn, enlargement of the abdomen and uterus. Despite the medicalization of the common knowledge, there was still no clear separation of symptoms of clinical and non-clinical importance. All symptoms were seen as "natural", commonly occurring manifestations of the dramatically altered physiology of the pregnant woman's body.

Management of Pregnancy

Prenatal care, when it occurred, typically took the form of advice on life style and the reiteration of common health knowledge and beliefs about pregnancy. If trouble arose, women consulted their midwife. Doctors were usually involved only when problems required medications or treatment not commonly prescribed or performed by mothers and midwives (Ulrich, 1990; Schotten, 1977).

The principle remedies proposed for all disorders of pregnancy were based on the humoral theory and involved adjusting the pregnant woman's bodily fluids in order to bring them into a more balanced or harmonious state. The symptoms of pregnancy were explained physiologically as a "plethora" and attributed to the retention of menstrual blood. If the symptoms of "plethora" were mild, women were encouraged to get fresh air, exercise, get sufficient sleep, and to eat large quantities of vegetables and ripe fruit in order to open the bowels and to relieve sensations of faintness and depression (Oakley, 1984). Water was recommended as the best drink because tea and coffee were more likely to cause heart burn and vomiting. Transient vomiting associated with pregnancy was often treated with cold infusions of spearmint or tincture of opium at bedtime. Severe cases of pregnancy induced plethora were associated with miscarriage, premature labor, convulsions, fever, and depression. In those instances, plethora was treated by taking away "excess" blood - venisection.

Another theory which commonly impacted the consciousness and behavior of pregnant women was that of "maternal impressions" (Oakley, 1984). Medieval

perceptions emphasized the importance of noncorporeal forces and allowed for an all-inclusive awareness of simultaneous realities (Erickson, 1976). This mode of perception was reinforced by Neoplatonist ideas about the significance of vision as a creative force and as a mode of understanding. Sight was conceived not as a passive recording of experience but as a form of creative energy. It was, therefore, within the realm of possibility that a woman's frightful experiences or strong emotional reactions could have unfortunate consequences for the condition of and viability of her fetus. Although there was disagreement about the malignant nature of maternal emotions, it was only prudent that an expectant mother avoid passion or wild excitement and the type of situations which were likely to evoke them. For most the question was not whether but how maternal impressions caused atypical or grotesque outcomes such as deformed fetuses.

There was a child ...lately born at Plymouth, with excrescences pushing from the mouth, and which certainly resembled a large bunch of grapes... Before she was aware of this faulty formation, the mother was closely questioned by the accoucheur, and she certainly did state distinctly enough, that in the early period of her pregnancy ...in passing along a street, she chanced to see a boy who had got a bunch of grapes, which he was eating very greedily as boys will do... (Blundell, 1834, p.137 in Oakley, 1984, p.24)

Travail

Colonial women did not expect to give birth alone nor did they desire that their husbands attend the births of their children. At the end of the eighteenth century, the midwife was still women's birth attendant; most women's only choice was which midwife would officiate. When a woman's travail (labor) began, the midwife was summoned by

her husband. And as Martha Ballard's diary demonstrated, midwives believed that it was dangerous for women to give birth alone, and midwives made every effort, often a heroic effort, to arrive before the birth occurred.

[April 24] A sever storm of rain. I was Calld at 1 hour PM from Mrs Husseys by Ebenzer Hewen. Crosst the river in their Boat. A great sea agoing. We got safe over then sett out for Mr Hewins. I Crost a stream on the way on fleeting Loggs and got safe over. Woderfull is Goodness of providence. I then proceeded on my journey. Went beyond Mr. Haineses & a Larg tree blew up by the roots before me which Caused my hors to spring back & my life was spared. Great & marvillous are thy sparing mercies O God. I was assisted over the fallen tree by Mr. Hains. Went on. Came to a stream. The Bridg was gone. Mr. Hewin took the rains waded thro & led the horse. Assisted by the small all mighty power I got safe thro & arivd unhurt. Mrs Hewins safe delivd at 10h Evn of a Daughter.
(Ulrich, 1991, p.5-6)

The progression of labor was rationalized in social rather than biological stages (Ulrich, 1990). When the midwife arrived she assumed responsibility for the care of the woman herself and for the management of her household. During early labor, the midwife often helped with household chores or finished some of her own hand-work. When the sound or quality of the woman's pains began to change, indicating that her "illness" was becoming more severe, the neighborhood circle of women were summoned. The presence of these women enabled the laboring woman "...to bear her pains to more advantage" (Scholten, 1977, p.144) and gave women more control of their situation (Leavitt and Walton, 1982).

During the final stages of labor the midwife with her assistants took full charge. Those who were unable to endure the tension of the impending birth left the room to wait

elsewhere with the men and children or busied themselves securing refreshments for visitors or attending to the household.

The general approach to labor and birth was to let nature do its work. Considered nature's assistant rather than a primary agent, midwives encouraged, watched, and waited and interfered intentionally as little as possible in the mechanics of birth (Donegan, 1984; Ulrich, 1990). They were, however, not simply passive observers, midwives routinely acted in other realms to make labor more tolerable and to facilitate delivery. Primary sources, such as Mrs. Ballard's diary, gave a detailed account of how ordinary births were managed. They do, however, provide, some insight into the activities of the colonial "birthing rooms". Women continued routine activities until the pains of labor assumed the quality of "forcing pain" and were incapacitating (Ulrich, 1990). At this point women typically withdrew to the "birthing room" but continued to move around or assume any position in a chair or bed that was most comfortable (Wertz and Wertz, 1989). Sympathetic magic (i.e., using a load stone to keep a pregnancy from miscarrying or placing an axe under the mattress to cut the pain of labor) which was rooted in the medieval habits of thought which attributed a wide range of capabilities to natural and man-made objects, was still an effective means of evoking the perceptions of care and comfort. Female attendants provided food and drink, enabling the laboring woman to preserve her strength. Cordials and red wine were administered routinely and sometimes liberally to produce relaxation and ease the pain of labor (Wertz and Wertz, 1989; Scholten, 1977). Warm clothes applied to the abdomen and the administration of enemas

were utilized to dilate the birth passage. Perineal tissues were lubricated to facilitate stretching (Leavitt, 1986). All the while women remained fully dressed, probably as much to preserve warmth as modesty (Wertz and Wertz, 1989).

Birth most often occurred in an upright position. At this time the laboring woman was supported, in fact, held upright by two women, family members, or neighbors while the midwife eased the infant out from under the woman's long skirts and petticoats. Available artifacts and records also indicate that the birth stool or some innovation of the ancient chair was used routinely to facilitate delivery (Wertz and Wertz, 1989). The high back of the chair supported the laboring woman's back; and by keeping the woman's position upright, the force of gravity worked to expedite birth. The narrow or cut away seat allowed the midwife to gently ease the infant from the birth canal while two or three of the women in attendance held and supported the laboring woman. Once delivered the umbilical cord was cut and tied, and the placenta delivered. It was only then that the woman was "put to bed" with her infant for the lying-in period. At this point the midwife left, only returning in the event of complications. The after-nurse supervised the lying-in period (Ulrich, 1990).

Significantly, it was after delivery that a woman was viewed as vulnerable and in need of rest to recover sufficiently in order to resume her household responsibilities and her marital duties. Ideally the lying-in period lasted at least three to four weeks. In reality, many women's parturition ended much earlier when they either decided or were forced by circumstances to return to their kitchens (Ulrich, 1990; Leavitt, 1986).

The Safety of Colonial Childbirth

Colonists neither kept vital statistics nor routinely recorded exact cause of death. Consequently rates of maternal mortality can only be inferred from gross statistics, and the relative dangers of childbirth must be inferred from diaries and letters which enumerated births and deaths and tell something about the type of response these events evoked. By-in-large, it appears that while childbearing presented some danger it has been over estimated as a cause of death and that the abilities of midwives to cope with problems of birth were underestimated. Conservative estimates suggest that birth was successful about 95% of the time (Wertz and Wertz, 1989; Ulrich, 1990).

Women often faced birth with fear of death and of their eternal judgement rather than joy and ecstasy. Their attitude appears to be more of a reflection of their culture's religious viewpoint of childbirth than of women's actual experiences. Protestants wanted birth to be a religious event, a time for salvation. Women in childbirth were expected to throw themselves on the mercy of God. Protestant ministers counseled women to repent and prepare themselves to confront God (Wertz and Wertz, 1989). Women and their midwives, however, knew from their own experiences that while birth was painful and could be frightening, serious complications and death did not represent the norm (Donegan, 1984). Mrs. Ballard's diary (Ulrich, 1990) as well as the diary of Rev. Ezra Stiles, President of Yale College (Wertz and Wertz, 1989) indicated that deaths in childbirth were extraordinary events, which unlike birth itself, deserved special attention

and special explanation. Martha Ballard's diary indicates that she had over 250 deliveries before a mother she attended "succumbed". And, unlike her other diary entries which matter-of-factly record the date, time, and sex of the child, the entry recording the first mother she lost was in comparison remarkable in its length and detail:

Clear. Mr Hinkly brot me to Mr Westons. I heard there that Mrs Clatons Child departed this life yesterday & that she was thot Expireing. I went back with Mr. Hinkly as far as there. Shee departed this Life about 1 pm. I asisted to Lay her out. Her infant Laid in her arms. The fist such instance I ever saw & the first woman that dies in Childbed which I delivered...
(Ulrich, 1990, p.39)

Mrs. Ballard is known to have supervised at least 991 deliveries, 814 of which occurred between 1785-1812, and were recorded in her diary. Only in 46 or in 5.6% of the recorded deliveries were there indications that the mother had experienced significant (notable) complications or that the outcome for the mother had been unfortunate (Ulrich, 1990, p.169-172). Mrs. Ballard, apparently, did not lose a single mother at delivery and only five during the lying-in (post partum) period. Her outcomes are comparable to those of other New England midwives (Donegan, 1984, p.308-309; Ulrich, 1990, p.192; Wertz and Wertz, 1989, p.18-20) and better than those in seventeenth and eighteenth century English villages (Dobbie, 1982; Wertz and Wertz, 1989). To the extent that Mrs. Ballard's experiences were typical, it appears that the average midwife probably encountered serious infection, hemorrhage, convulsions, and "milk-leg" (phlebitis) about three or four times in her career. In the unusual event that Martha returned to treat a complication, the symptoms recorded in her diary were typically those of transient and ordinary illness such as sore breasts, fever, colds, sore throat, problems associated with

their "milk coming in", and in a couple instances the misbehavior of the woman's husband (Ulrich, 1990).

Problems associated with obstruction or presentation appear to have been more common but more often than not they were manageable. Midwives drew from a considerable reservoir of empirical wisdom and practices which apparently included the ability to remove obstructions and to turn breech births. Sneezing powder (snuff, white hellebore) was at times administered via a quill into the woman's nose in order to make her sneeze, bear down and dislodge a difficult birth (Donegan, 1984). Occasionally, the physician was summoned in the case of an emergency (i.e., in order to extract a fetus by instrument). Again to the degree that Mrs. Ballard's practice was typical, it appears that in contrast to the horror stories of babies being stuck crosswise in the pelvis, of mothers bleeding to death, or succumbing to puerperal fever, there were few emergencies which required the midwife to call a physician. Reportedly Mrs. Ballard summoned a physician twice, and after the second incident, Mrs. Ballard wrote:

My patients illness Came a 8 hour morning,. Her women were Calld, her Case was Lingering til 7 pm I removed dificulties & waited for Natures operations till then, when shee was more severly attackt with obstructions which alarmed me much. I desidr Doctor Hubard might be sent for which request was Complid with, but by Divine assistance I performed the oppration, which was blisst with the preservation of the lives off mother and infant. The life of the latter I dispard off for some time...

In the margin of the day's entry she wrote, "The most perelous sien I Ever past thro in the Course of my practice. Blessed by God for his goodness...". Never again did she feel it necessary to summon a physician (Ulrich, 1990, p.181).

Colonial midwives achieved a maternal mortality rate of 1 per 200, which seems high when compared to the current rate of one maternal death per 10,000 births. It was, however, 1935-1940, before doctors and the practice of obstetrical medicine achieved a maternal mortality rate comparable to that of the colonial midwives.

The occurrences of miscarriages, still births and neonatal deaths were significantly more frequent. Mrs. Ballard's diary indicates that she experienced an infant death or still birth at the rate of one every twenty four births (Ulrich, 1990). Deaths of infants or the loss of a fetus was not as great of a concern as the loss of a wife and mother. Infant deaths were often not recorded and even though the incidence of neonatal and infant mortality may have been as high as 10%, childbirth per se was not perceived as inherently dangerous for the infant. This might be explained by the fact that infants rarely died from trauma associated with birth. Moreover, the loss of at least one child to one of the many endemic and epidemic diseases was nearly a universal experience. The loss of an infant, however, did not seem to be perceived as a loss equal to that of an older child whose particular personality the parent's had come to understand and feel affection for (Ulrich, 1990, p.12).

Subtle Signs of Change

Mrs. Ballard's diary came to a close in May, 1812, about three weeks before her death. Although slowed by the fatigue of age and illness, it appeared that the last months of her life had not changed substantially since she had began her diary seventeen years

earlier. She was Mrs. Ballard, the consort of Ephraim Ballard, a good neighbor, a colonial good-wife, and still a respected midwife in her community. Except for recording that she "...had been very ill ...and felt very feeble" (Ulrich, 1990, p.341), Martha's last diary entries suggested that her primary concerns were still governed by the daily demands of her household and the community activities of herself and family. On April 26, Martha had "safe delivered" Mrs. Heath; on May 4, Mr. Ballard had gone to the Town meeting and Dolly Lambard, her daughter, had come to help her, and on May 6, she recorded that the weather was stormy -- spring was slow in coming and planting was delayed (Ibid.). The diary closes on May 7:

Clear the most of the day and very Cold & windy. Daughter Ballard and a Number of her Children here. Mrs. Partridge & Smith allso. Revered Tippin Came and Converst swetly and mad a prayer adapted to my Case. (Ulrich, 1990, p.341)

However, the social context of Colonial New England which had been the backdrop to Mrs. Ballard's life and to the practice of social medicine was beginning to unravel. By 1800, the demographic and social character of America, particularly the Northeast, was changing. Westward expansion not only provided new opportunities, it undermined the continued stability of community relationships which made the transmission of essentially oral knowledge meaningful and the domestic economy of colonial women possible. Cities were not only growing and developing a uniquely urban character, the conventional systems of family and labor were being transformed by the realities of industrialization and the rationality of the market place. Networks of personal, reciprocal obligation were being replaced by systems of contracted relationships

which not only furthered emerging notions of individuality and self-determination but were also more suited to the economic realities of capitalism and the autonomy of urban life. Life was perceived as a competitive rather than cooperative enterprise. Functional relationships supported the proliferation of technological innovation in medicine as well as in industry and facilitated urban life which increasingly involved living and working amongst strangers. Alternative social and intellectual ideologies, including radical ideas about the nature of the body and about the composition of the body politic were, like many other refined commodities and technical processes, being imported from Europe and were beginning to impact the character of American life and the context of American thought (Larkin, 1988).

The practice of medicine was beginning to change. New medical ideas and therapies which were loosely based on Newtonian physics rather than Galen's humors were becoming more common. More and more physicians perceived medical practice as a full time occupation. A unified system of therapeutics which merged women's realm of "ordinary" and men's realm of "emergency" medicine was evolving. Regular physicians were incorporating midwifery into their practices. The merger of "ordinary" and "emergency" medicine effectively required subordination if not the elimination of social practitioners (women), if doctors were to obtain the experiences they needed in order to further the notion that the practice of medicine was a full time occupation and that formal medical education was a necessary requisite for safe practice and competent practitioners.

Although a pragmatic approach rather than theories of a medical or social ideology still accounted for doctors attending "normal" births and for their use of new therapies such as laudanum, digitalis, or forceps, the new science of obstetrics and the professionalization of medical roles was beginning to undermine the dualistic roles which had been essential to the institutions and practice of midwifery. Martha, however, was still most comfortable with doctors and ideas that reinforced the conventional social relationships and familiar therapies (Ulrich, 1990, p.58). During her last years of practice, she was uncharacteristically critical of young, European educated doctors who were using strong new medicines and making a practice of officiating at ordinary deliveries. Discretely, in the privacy of her diary, she objected, "...called Dr. Page who gave my patient 20 drops of Laudanum which put her into such a stupor her pains (which were regular and promising) in a manner stopt till near night when she pusht & they returned..." (Ulrich, 1990, p.177). She found his management of deliveries inept and recorded "...she was delivered of a dead daughter on the morning of the 9th instant, the operation performed by Ben Page. The infants limbs were much dislocated as I am informed" (ibid., p.178).

Initially it appears that the unraveling of social medicine and the rise of a university educated, scientific elite were evident in uncharacteristic tensions and manifested in interpersonal conflicts between physicians and midwives. Again, Mrs. Ballard's diary is revealing. In October, 1799, Ephraim Ballard experienced a severe attack of colic, and Martha sent for Dr. C. after her attempts at treatment proved to be

unsuccessful. As the incident was recorded in Martha's diary, after Dr. C. treated Mr.

Ballard, he the scolded her for undermining his advice to another patient:

...accused me with going to Mr. Dinglelys in his sickness and objecting to his prescriptions and prescribing some of my own and setting Mrs Dingley Crying by giving my opinion of the disease and said this is one of many instances I had done so... (Ulrich, 1990, p.256)

The attack was unexpected and was clearly a new type of social encounter for Martha. But, it is doubtful that she fully comprehended what it meant for a doctor to attack the discretion and behavior of a midwife, the most knowledgeable and respected of the female healers. Only in retrospect does the incident Martha described become more than two individuals' interpersonal dispute and acquire the added dimension of a social-medical conflict. Physicians in 1800 were becoming acutely aware of their own authority, and they were increasingly willing to assert their authority against the person as well as the medical opinions and prescriptions of presumably inferior practitioners (Ulrich, 1990, p.251-260). In time, such assertions of authority and the conflicts with other practitioners that were evoked would be interpreted as inevitable if not a necessary prerequisite to the evolution of a unitary professional medicine characterized by the ascendancy of a university educated, scientific elite (Starr, 1982; Rosenberg, 1977).

Chapter II: From Organism to Mechanism

The Ideological and Social Roots of the Nineteenth Century Transformation of America's Birthing System

From Midwifery to Obstetrics

Martha Ballard's last years of practice were her most difficult. The cooperative, reciprocal relationships of community life were being strained by migrations to the urban, industrial centers of the Northeast and to the frontiers of the South and West. The traditions of orthodox Protestantism and the village folkways of medieval, agrarian life were decaying (Merchant, 1990; Ulrich, 1990; Larkin, 1988). Long accepted representations of man and his cosmos had already been divested of empirical reality (Barrett, 1986). A new mechanistic picture of man and nature was being generalized from the realm of metaphysical mysteries and cosmological images to schemata for establishing a social order and for harmonizing individual's psychological processes with new factory like social institutions and with the realities of urban life (Casti, 1989; Campbell, 1972). Consequently, the social and ideological systems upon which Martha Ballard's community life and practice of midwifery depended were disappearing. In retrospect, it now appears that Martha Ballard's struggles to maintain her household and to comprehend physicians' intrusions into women's practice of social medicine

foreshadowed the social upheavals, political conflicts, and therapeutic battles which characterized the nineteenth century.

Throughout the nineteenth century, midwifery and the emerging practice of obstetrics coexisted as fundamentally different approaches to the processes of childbirth. They were grounded in and gave expression to opposing views about the reliability of nature and of man's role in and proper attitude towards natural processes. The fate of the midwife ultimately depended on the outcome of those arguments. As early as 1820, an active campaign by medical professionals against midwives was taking shape. One Harvard Medical School professor published an anonymous essay in which he argued that women could not be instructed in medical science as men were instructed without destroying essential qualities of their character, thereby disqualifying them as women (Ulrich, 1990, p.251). At about the same time, John Ware, a Boston physician was arguing that women's character and education disqualified them as birth attendants (DeClerq, 1994).

At the end of the nineteenth century, Massachusetts was the center of that campaign to eliminate midwifery. In 1894, the Commonwealth had enacted a Medical Practice Act establishing the Board of Registration in Medicine (DeClerq, 1994). It was responsible for administering examinations to prospective physicians, including obstetricians and for issuing licenses to practice medicine. In 1897 the Birth Registration Act was passed. This act required birth attendants to report all births to the city clerk. And, once these two laws were enforced, midwives became subject to being charged with

the illegal practice of medicine (DeClerq, 1994). In 1904, Maddalina Della-Russo, a midwife practicing in the Boston area was charged and convicted of practicing medicine without a license. The following year, Hanna Porn, an immigrant from Finland, who had established a midwifery practice after completing the Chicago Midwifery Institute's six month program, was also charged and convicted of the illegal practice of medicine. Although she appealed her conviction, the Massachusetts Supreme Court ruling "...that midwifery and obstetrics were synonymous maked criminals out of scores of midwives, many of whom like Mrs. Porn, continued to practice." (DeClerq, 1994, p.1026). In 1908, Mrs. Porn was, after more convictions for practicing medicine without a license, not only fined but jailed for three months. In the years that followed, Hanna Porn continued to practice surreptitiously as a "private nurse" probably allowing parents to register the birth of their children.

The campaign against midwives escalated. J. Whitridge Williams (1912), professor of Obstetrics at John Hopkins University advocated the gradual elimination of midwives in the large cities, the greater development of visiting obstetric nurses and of helpers to assist them, and the extension of obstetric charities. And in fact, most obstetricians actively campaigned against elevating the midwife by either elevating, training or assisting her. Laws, first in Massachusetts, then throughout the Northeast, were passed not only restricting or prohibiting the practice of midwifery and criminalizing the activities of the midwife, but penalizing physicians by loss of licensure if they signed birth registrations for midwives or supported their practice. In 1925, a

Massachusetts physician lost his medical license for assisting an unregistered practitioner (DeClerq, 1994). If in the public's perception the midwife was a sufficient or adequate attendant, then the height of caution would be to enlist the services of the general practitioner. There would then, be no perceived need to seek the expert services of the obstetrician. Within a century of Mrs. Ballard's death, the midwife was no longer a respected, knowledgeable, dedicated member of her community but "...a relic of barbarism" (DeLee, 1916, p.407), "...an ignorant, untrained, incompetent, woman..." responsible for "...unnecessary deaths and blindness of infants, and avoidable invalidism, suffering and death of the mothers." (Edgar, 1916, p.386).

During the nineteenth century the theoretical basis for the practice of medicine changed, and an alternative view of childbirth was emerged. This new mechanistic view of saw pregnancy, parturition, and births as obstacles to be controlled and overcome rather than as a natural process to be facilitated through support and cooperation. Unlike the practice of midwifery, the practice of obstetrics grew out of physicians experiences with abnormal birth and was framed, from the beginning by the experience of the clinic and in the language of pathology and impending disaster (Wertz and Wertz, 1989; Foucault, 1963). Because physicians were not routinely consulted with on normal, average deliveries until the twentieth century, normal pregnancy and parturition were seen as exceptions rather than normal physiological conditions.

In the United States, nineteenth century arguments about nature versus culture pitted the Old Worlds' organic worldview and the institutions of traditional society

against the mechanistic worldview and the emerging institutions of a modern industrial society. Embedded in this larger social discourse were the arguments about the efficacy of the modern, scientifically educated obstetricians as opposed to the ancient institution of midwifery and the persona of the traditional midwife. While these arguments were conducted primarily in the late nineteenth and early twentieth century, they were, in fact, more of less a continuation of earlier, more fundamental arguments about creation, authority, and knowledge which were framed centuries earlier in the theological debates of the early Christian church and in the philosophical and social upheavals of the European Renaissance. Although it was not until the twentieth century that the midwife and the practice of midwifery were brought to the brink of extinction, it was in the middle ages that the persona of the midwife was first compromised. And, it was during the Renaissance when knowledge of the new natural sciences began to replace the liberal arts as the basis for medical practice, that the midwife's replacement, the obstetrician, began to take shape in the form of the accoucheur or man-midwife. Therefore in order to explain the ascendancy of the obstetrician in the nineteenth century and the transformation of America's birthing system in the twentieth century, it is necessary not only to explore the events of the nineteenth century but the social and intellectual changes which culminated in the mechanistic worldview and made biomedicine and urban industrial life possible.

From Organism to Mechanism

As mechanism replaced organism as the theme which unified Western notions of the cosmos, society, and self into a single cultural reality, materialism (the structures of logical reason and the secular institutions of capitalism and science) began to replace spiritualism (the habit of faith and the sacred institutions of the church (religion) as the preferred means for perceiving and the rational basis for acting in the natural world (Merchant, 1989; Houghton, 1957; Jacob, 1973). The rationalizations for the divisions of traditional society and the class oriented basis for the division of labor dissolved. Thus, as medicine professionalized, it reorganized itself around the new science of anatomy; areas of medical specialization as well as concepts of health and illness were linked to particular organs and the functions of organ systems. Ecclesiastical hierarchies and orthodox theologies effectively challenged by Enlightenment philosophers' faith in the perfectibility of society (progress) enabled physicians to expand the practice of medicine beyond treating the sicknesses of the urban upper classes into the realms of health maintenance or prevention of sickness and to society's lower classes (Risse, 1992). During the nineteenth century, physicians through their programs of hygiene and health maintenance as well as through their explanations and treatments of their patient's episodic sicknesses played a major role in inculcating individual members of society with the basic tenets of allopathic medicine and the mechanistic worldview (Haller and Haller, 1974; Rotundo, 1984; 1993; Rosenberg, 1976). As a result the explanations of

biomedicine were accepted long before the 'scientific' treatments of the regular or allopathic physicians were effective.

What emerged was a powerful cultural framework for translating scientific discoveries into a new vision of reality and an effective vehicle for transmitting the machine metaphor into every aspect of American life. The transformation of traditional medicine and midwifery its system for doing birth, were part of the larger transformation of traditional society. And, while both were made possible by and manifested in the technological advances and institutional reforms of the nineteenth century, the ideological and social roots of these transformations were buried in the theo-cosmology of the fifth century orthodox Roman Christendom and in the theological debates (Faith versus Reason) of the High Middle Ages which produced a Christian concept of being (The Great Chain of Being) (Knowles, 1962; Mason, 1953). It was then that Western concepts of creation came to be dominated by themes of construction/production rather than those of development/growth and that patriarchy became all-pervasive. The social stage was set for the degradation of women and the demise of the midwife.

With the social and intellectual upheavals of the Protestant Reformation and the Italian Renaissance, the common sense basis of knowledge and the hierarchical order of the cosmos and society were undermined (Boorstein, 1983; Mason, 1953; Erickson, 1976; Merchant, 1989). It was then that reality was sought in a material world composed of elementary building blocks, that knowledge depended on facts derived through the scientific method, and that social life and progress were formulated in terms of a struggle

for existence and of the need for economic growth and technological development (Capra, 1982, p.29-42; Boorstein, 1983). And, as the foundations of modern society and modern science began to evolve, so did the man-midwife, a replacement for women's birth attendant, one whose knowledge of female anatomy and skill in the use of medical instruments recast human creation and birth, in terms of the physical/mechanical processes of the body rather than as an alchemical or spiritual mystery (Wertz and Wertz, 1989; Davis-Floyd, 1992; Donnison, 1977; Schiebinger, 1989).

Encroachments into Women's Mysterious Office

For centuries masculine powers had ended at the threshold of the room where children were born, where sickness was treated, and where the dead were washed for burial. In the private realm of the home and through women's domestic activities, life and death were joined. Women were perceived to have special knowledge of and control over sexual pleasure, reproduction, and death (Duby, 1985; Achterberg, 1990; Walker, 1985; Ulrich, 1990). In private sanctums, even socially powerful men, perceived themselves as powerless over women's spells and philters "... (which) could sap a man's strength or heal his wounds, kindle his desire or snuff it out... women ruled over the dark realm of sexual pleasure, reproduction, and death." (Duby, 1985, p.80)

The Middle Ages was a world in which the macrocosm was understood to correspond with the microcosm; it followed then, by the law of analogy, that generation of animals, metals, and particularly humans followed the same progression as in the

formation of the world (de Givry, 1971, p.351). The whole world was alive; God was the ultimate alchemist; and whoever unraveled the mystery of creation knew the secret of the Philosopher's Stone - "... the physical vehicle for the "divine spark" necessary to the process of transformation." (Alchemy: The Art of Knowing, 1994, p.50). The model for alchemical work was nature and conjugal love was the model for the alchemical process (de Givry, 1971). As a result, sexual metaphors permeated the culture, explaining the creation of forms in the universe and in nature, of inorganic and organic substances. Social relationships were like the cosmos, hierarchical, and gender roles depended more on class than sex, although women were expected to defer to the men of their family or class, they were not categorically subordinate to men.

Early Christian as well as Neoplatonic accounts of nature were typically elaborated speculations about the (carnal) copulation between the male and female principles. Aristotelian ideas of nature and matter had been tied to the ancient practices of metallurgy, thereby linking the processes of developing the most perfect of metals, pure gold, with the interior processes of purifying the soul, spiritual gold (Burland, 1968, p.19). Changes in the state of metal were analogous to the development of the human person as well as the universe, a contemplative means by which the human soul as well as the metal was purified by fire, transformed so to speak into gold. With its assimilation into Christian belief, Alchemy incorporated Christian images of the Cross, the Virgin, the Holy Spirit, and the Christ-Child into its cosmological interpretations. Crucifixes were designed so that the two sides of the cross represented the 'essential' and 'substantial', of

the 'active' and the 'passive', of the forma and materia of the cosmos (Burckhardt, 1971, p.105-112). In Alchemy, Christianity found a natural mirror for its revealed truths, a way through the contemplation of nature to achieve a true 'gnosis' (Burckhardt, 1971; de Givry, 1971; Burland, 1968).

Creation and knowledge thereof were conceived of as essentially inward processes, which were manifested in the observable cycles of birth, development, death, and rebirth. The male and female principles, for men whose perspective was immediate and linked with sensory experience, were simply two aspects of the same thing, God, "... related to one another as male and female, as father and mother, and cannot be separated from one another - for in what ever the earth produces Heaven is present as creative power, while the Earth, for its part, gives form and body to the heavenly." (Burckhardt, 1971, p.58). Matter is not something which can be separated from Spirit, and like Spirit remains an aspect or function of God. Created or perceptible objects only resulted when there was a commingling of matter, potentiality, and spirit, the active counterpart or Word of God. Transmutation, whether it was lead into gold or the soul into an unfettered consciousness, spiritual gold, required dissolution (death), the reduction of a substance to its fundamental substance or original state, materia prima. Only when freed of all rigidities and inner contradictions could the Spirit or Intellect imprint a new noble or perfected form (rebirth).

In this paradigm, the female principle, and by inference woman, was a co-partner with and symbolically equal to man and the male principle. Significantly, early conceptions of God in Christianity were remarkably androgynous in character; and in

some sects God was portrayed as a dyadic being mother-father rather than as the trinity, father, son, and holy spirit (Achterberg, 1990, p.38). Creation and generation were perceived as a part of a cycle in which ends and beginnings were undifferentiated and undifferentiable. Conceptually, if not actually, alchemy was a type of midwifery; and midwifery was not simply a system for managing childbirth. The midwife like the alchemist had through observation detected the grand rhythms of nature and by imitation of the work of Nature identified processes by which temporal circumstances which interfered with the union of the generative principles could be removed and nature could be manipulated for human benefit (Merchant, 1989, p.111; Burckhardt, 1971, p.126). Although often separated by class and gender, the midwife, like the alchemist or wizard, was not only women's birth attendant, but nature's assistant or helpmate in generation.

Acquired through the tutelage of old women, women's ancient tradition of domestic healing presumed not only human knowledge of the relevant mechanical (obstetrical) arts to the craftsman but the magician's esoteric knowledge of the correspondences between the macrocosm and the microcosm and techniques for manipulating the world spirit in order to bring about changes in the world of nature and of human events (Erickson, 1976; Walker, 1983). In the labor intensive economy of medieval society, the household was a major productive unit, women's work was both necessary and valued. Fertility and childbirth were celebrated not only as a personally significant life event, but in the apocryphal Gospels (Life of Mary) and in paintings and even ecclesiastical embroidery which depict images of birth and conception from the Life

of Mary (Parker, 1984). In some accounts of the birth of John the Baptist, Mary is portrayed as a midwife. In the apocryphal Gospel According to the Pseudo Matthew, Joseph leaves Mary to find a midwife. Although Mary had given birth by the time he returned with two midwives, it was the midwives who testified to Mary's virginity after giving birth (Parker, 1984, p.53 - 55). Despite condemnation of the celebration of childbirth in ecclesiastical embroidery and antagonism towards midwives in the period of Opus Agelicanum (900-1500AD), productions of ecclesiastical embroidery produced in England, images of midwives continued to appear, and the apocryphal midwives were shown assisting at the Nativity.

The Impact of Christian Orthodoxy: A New Creation Story

During the Middle Ages orthodox Christian theologians became less tolerant of the eclectic blend of pre-Christian, pagan, and folk traditions which early Christians had found so satisfying and which had been incorporated into both the religious beliefs of Gnostic sects and into the paradigms of the alchemists (Achterberg, 1990; Keller, 1985). By the second century, concerns about heresies and gnosés had thrown the early Christian Church into crisis. In the absence of a canon, the only way to verify the authenticity of Christian belief and ritual practices was the apostolic tradition (Eliade, 1982). The Apostles and all who had known them personally had died; and although the continuation of their testimony had been ensured by a number of texts they had composed or inspired and by oral tradition, both had become subject to dubious innovations. However, so long

as the "Book" and dogmas of the faith were not clearly established, it was difficult to apply the term heretical to certain daring interpretations of Christ's teachings or the challenge the teachings of gnostic or spiritual masters who interpreted the story of Christ's descent into the world by detaching it from Biblical context and who derived their authority, not from the succession of bishops but from the oral traditions of esoteric doctrine communicated to the Apostles by the resurrected Christ.

Gradually, an orthodox doctrine emerged, one that incorporated the Old Testament theology of faith and the sacred history of Israel with the rational speculation of Greek cosmology and a Christianized Neoplatonic philosophy of reason (Knowles, 1962; Eliade, 1957). The wedding of faith and reason resulted in the nearly universal conviction that there was a single, true rational account of man, of the universe, and of an omnipotent God. Essential defining doctrines emerged from historical or literal, allegorical or symbolic, and moral or ethical interpretations of the scriptures. And, by the end of the first millennium, the theology of the Roman Church (Western Christianity) was firmly rooted in the doctrines of the Trinity, of Creation, of the Fall, of the Incarnation, of the Church, and of the Last Judgement (Baldwin, 1971). However, as the general framework of Christianity became more organized, it hardened becoming decidedly more authoritarian and patriarchal. In fact, by the end of the fourth century, the organization of communicants had adopted structures which excluded women from the priesthood and from the administration of spiritual activities (Eliade, 1985).

Subsequently, Christianity elaborated a creed of creation rather than return (Eliade, 1982).

The Old Testament represented a late stage of patriarchal development; the female principle had already been reduced to its elemental state - *tehon* or "the deep" (Campbell, 1964). Therefore, it was only a short step to insist that God had created the world from "nothingness". Unlike the androgynous God of early Christianity or the alchemist's model of conjugal cooperation, biblical theology represented God as a pure male spirit who had brought about creation by imposing His will through the rationality of the Word on the chaotic masses of a dark formless universe. Domination had replaced cooperation as divine motherhood; and birth was taken from the womb of women and taken over by the father who gave birth from the brain (Campbell, 1969). Form (Plato) was now inherent in the mind of God rather than in the union or coagulation of the male and female principles.

Once the universe was made rather than grown, God was no longer an alchemist who participated in the Creative act but more like an architect or geometer, who stood outside the universe and directed the building of nature and the history of His people (Watts, 1958, p.39-42). The stage was set for man and the universe to be interpreted mechanically, as consisting of distinct entities which are comprised of their structural parts or artifacts. Limited by a consciousness which takes things in and symbolizes them one by one, the workings of both man and the universe appear to conform to logical laws which can adequately be expressed as a linear series of cause and effect propositions.

Nature appears to conform first to Euclid's abstract figures and, in time, to Newton's mathematical formulas. But once nature fit into a mechanical or mathematical analogy, mechanism turns back on God himself. God is reduced to and then conceived of as a set of principles, moral, logical, scientific, and aesthetic. "His love tempered with justice is likewise principled, since it is willed love rather than felt love, the masculine Logos rather than the feminine Eros." (Watts, 1958, p.41)

The differences between understanding the universe as something which has been made (mechanical) rather than grown (organic) cannot be overstated. A living organism does not construct itself as if it was an architect, from the outside to the inside. Rather there is an inwardness which, although mysterious and inscrutable but not chaotic or capricious, is spontaneous rather than objective. In the end, "laws of nature" are, according to Watts (1958, p.41) somewhat clumsily abstracted from the regularity of organic behaviors - "ex post facto": and the mechanical analogy of organic, spontaneous order is like that of the triangle standing for the mountain. Once this idea is generalized a whole series of associated distortions can and by the twentieth century had occurred. The observable, objective part was substituted for the experienced, subjective whole.

TABLE 2.1**Mechanical vs. Organic Categorical Perceptions of Reality**

Minutes are to Time
 as
 Inches/Millimeters are to Space
 as
 Atoms are to Structure
 as
 Genes are to Heredity
 as
 Chromosomes are to Gender
 as
 Trauma/Germs are to Sickness
 as
 Mutations are to Evolution
 as
 Plans are to Development
 as
 Mechanisms are to Function
 as
 Changes are to Progress
 as
 Dichotomy is to Difference
 as
 Machines are to Modernity
 as
 Biology is to Medicine
 as
 Technology is to Control
 as
 Grammar is to Language
 as
 Statistics are to Chance
 as
 Taxonomy is to Order
 as
 Class is to Hierarchy
 as
 Rationality is to Knowledge
 as
 Logic is to Reason
 as
 Money is to Value
 as
 Truth is to Honesty
 as
 Policy is to Judgement
 as
 Loyalty is to Commitment
 as
 Legality is to Prudence
 as
 Law is to Control
 as
 Individual is to the Group
 as
 Independence is to Interdependence

Tensions Within Orthodox Christianity

The inherent differences between the ancient Greeks and the ancient Hebrews were unwittingly incorporated into orthodox Christian theology. Unlike Greek religion and Hermetic philosophy, Hebrew religion was rooted in faith rather than reason and supported by historical (linear time) accounts of God's actions in the world rather than mythological elaborations (circular time) of the Gods and their relationship to the world. Early Christianity was based on facts registered in history rather than on logic (Baldwin, 1971). Consequently theology was a historical rather than a philosophical problem; and philosophy was regarded primarily as an explanatory tool, a means for understanding or extending the truths revealed in the Scriptures. While Augustine and his followers like many early Church Fathers, made use of philosophy to explain and to illustrate theological points, i.e., powers of the soul, processes of cognition and volition, they never held that components of logical analysis were reflections of fundamental ideas or forms or possessed any real existence in their own right nor did they attempt to construct a whole system of thought (philosophy) which was congruent with their emerging system of Christian theology (Knowles, 1962, p.89-92, 110). For them, truth was truth whether from the Bible or from the insight and observations of the Greeks; and they held that there was a body of natural truth which included a natural defense of God's goodness and omnipotence, a natural psychology, and natural ethic, and that this body of knowledge could both be ascertained with certainty and used as a foundation for Christian theology.

The implicit division between philosophy and theology and therefore, between reason (natural, rational wisdom) and faith (supernatural wisdom or revelation) did not occur so long as the theology of grace and the supernatural life was not elaborated and there was no interest in analyzing or describing either the universe or the microcosm of man in philosophical terms (Knowles, 1962, p.34). It was only later that theology was detached from Bible study and began to develop its doctrines on the basis of logic as well as on the basis of Scriptural revelation. Even then the division between faith and reason was not in the content of the argument so much as their divergent methods for seeking the truth - God still guaranteed the unity of truth, therefore true faith and right reason could never really disagree (Baldwin, 1971, p.94).

Evolving a Christian Worldview

With the rediscovery of Aristotle's physics in the twelfth century, theology and philosophy became increasingly separate realms of knowledge as well as different approaches to knowledge. Aristotle's writings on natural science and metaphysics were, in many respects the embodiment of Greek naturalism and rationalism. They also seemed to be in conflict with the supernatural and non-rational character of revealed Christianity and with important tenets of orthodox theological doctrine. Consequently, theologians were faced with reconciling Aristotle with Christian revelation. In question was the authority of faith. Plato had maintained that true knowledge could only be acquired intuitively by the 'eye of the soul', and Aristotle had stressed the

importance of experience and the role of observation, the 'eye of the body' in the body (Koestler, 1959). Augustine had argued that understanding followed from belief; Aristotle's writings seemed to suggest the inverse, that belief followed from understanding (Baldwin, 1971).

TABLE 2.2

**Inherent Tensions 12th Century
Two Strains of Thought in Medieval Christianity**

HEBREW THEOLOGY	GREEK PHILOSOPHY Neoplatonic
HEBREW HISTORY	GREEK MYTHOLOGY
FAITH - CHRIST Faith in God's existence	REASON - ARISTOTLE Logical procedures of the Ancient
REVELATION	LOGIC / DIALECTICS
DIVINE SCIENCE Spiritual knowledge existing when in union with the spirit	NATURAL SCIENCE Province of reason followed Aristotle
POSTIVE APPROACH TO TRUTH	
DOGOMATIC THEOLOGY Based exclusively on revelation and followed the Scriptures	NATURAL PHILOSOPHY Province of Reason followed Aristotle
NATURAL THEOLOGY Used the methods of both revelation and reason	

Neoplatonic Philosophy

St. Thomas Aquinas and the Great Chain of Being

The intellectual unity of Christendom was in question. With the rediscovery of Aristotle, two worldviews, one eternal and immutable (Plato), one changing and material (Aristotle), were juxtaposed (Koestler, 1959). Significantly for the church and its theology, the natural philosophy of Aristotle appeared not only to support the notion that knowledge could be acquired through perception of the observable world (Reason) but that God ruled the world from outside, an Unmoved Mover who spins the world from the Heavens. This approach to knowledge and conception of God contrasted sharply with the theology of Augustine (faith) which had incorporated Plato's world of pure ideas and forms into a mystic conception of a God who ruled the world from the inside - the anima mundi possessed with a divine soul (Koestler, 1959, p.59-61).

St. Thomas Aquinas accepted Aristotle as a basis for his own interpretations of the visible universe while framing a conception of God and the celestial world that was in part drawn from a reworking of Judeo-Christian revelation and Platonic metaphysics (Knowles, 1962, p.257-258). His resolution to the growing conflict between the doctrine of faith and the philosophy of reason was accomplished by first splitting the universe into the celestial realm or heavens which were exalted and the sublunar realm of earthly existence which was lowly and subject to change, and then by reconnecting them at the point of man and the realm of human existence (Knowles, 1962; Koestler, 1959). Man,

his physical body (mind/body/soul) and his social body (church/state) was the pivotal point, the place where the celestial and sublunary worlds came together; and it was there that Plato's world of ideas and Aristotle's world of objects were joined. What emerged was a continuous ladder (Jacob's ladder), a cosmic hierarchy conceived to be a scale of values which established the gradations between apparent opposites, and as a Great Chain of Being which had made the gradations manifest in God's creation. The principle of continuity, however, not only made it possible to give what had essentially been a hierarchy of values and qualities concrete representations in space; it established a convincing basis for explaining the duality of human existence (spirit and animal) and of human nature (good and evil).

In the end, Aquinas' scheme encouraged both a more positive attitude towards nature, and the recognition that reason was not simply the hand maiden of faith, but potentially an independent source of knowledge (Koestler, 1959). Human reason was accepted as an adequate, self-sufficient instrument for attaining truth within the limited realm of man's natural experience. Aquinas maintained that the pure mysteries of the Trinity and Incarnation were matters of faith, beyond proof, comprehension, or logical explanation. Revelation, not reason, was the only means through which man could acquire knowledge of the celestial realms.

The Neoplatonic resolution of the conflict between faith and reason, theology and philosophy encouraged a more positive attitude towards nature and the study of natural phenomena; but it was also to have profound effects on the role attributed to the female

principle in creation, on the Church's conception of women's nature, and in turn, on how women would be allowed to participate in society and in the creation of its culture. By accepting Aristotle as the basis for the interpretation of the visible world, Aquinas' Neoplatonic philosophy was extended into the sublunary realms of the universe and into the microcosms of man and nature. All the natural values of human social activity and by implication a host of other activities such as art, medicine, and education were admitted to the Christian purview (Knowles, 1962). Once the celestial hierarchy was connected to the sublunary world of earthly existence, the ecclesiastical hierarchy, which had patterned itself after the fixed hierarchy of the angels, began to purify the culture by superimposing church doctrine on social organization and behavior as well as non-religious beliefs and practices. The principle of continuity had not only made it possible to arrange all living beings into a hierarchy (Chain of Being) according to degree of perfection, power of soul, or realization of potential; it made it virtually imperative that women's powers and influence be diminished. More corporal as well as more corruptible than men, women's place in nature was also below that of men. Already deprived of heavenly and ecclesiastical authority, women's social authority and, therefore, social roles and independent activities were now in question. Orthodox Christian theology was essentially incompatible with women's control over the mysteries of life and death. As reason was becoming the bride of faith, women, following the fate of the female principle, were being transformed from brides to handmaidens.

Impact of the Christian Worldview on Women and the Practice of Midwifery

Not surprisingly, theologians such as St. Aquinas began to view the processes of human reproduction as similar to God's creations in the world. St. Thomas amongst others argued that woman by virtue of her creation from Adam's rib was fundamentally inferior to and weaker than man. Adam was a less perfect image or representation of the Father, hence woman was, by logical inference, a less perfect representation of man. Women's position in the hierarchical structure of the medieval cosmos was beneath man's. Consistent with the biblical model of creation and Galen's view of procreation, St. Thomas argued that women were only capable of the passive, less perfect role of providing corporeal matter upon which the active seminal power of man's seed could act (Tuana, 1988; Achterberg, 1990; Schiebinger, 1989).

While the incorporation of Galenic medicine extended the biblical account of creation from the realms of metaphysical speculation to the realm of physical representation, the uniquely Christian interpretation of the Fall extended the concept of women's inferiority into the realms of character and morality. The Church's Doctrine of Original Sin not only defined the nature of women's character deficits, it legitimized women's subjection to the authority of the church, the state, and men. Unlike other interpretations of the creation and of the mythical garden of life, the Judeo-Christian interpretation viewed the act of eating fruit from the tree of life not as an explanation for wisdom and consciousness but as an act of disobedience and the explanation for the evil inherent in the world and man's condition (Achterberg, 1990, p.66 - 67). Symbolically

the snake or serpent, which had long been associated with the primordial and the female principle, no longer symbolized wisdom, renewal or rebirth but the devil, destruction through the seduction of strength by matter and the incarnation of human frailty - the evil and ephemeral inherent in all worldly things (Cirlot, 1971,p.286). Created from man, not from God, women were by definition further from God and closer to nature and therefore less pure. Therefore it was rational if not reasonable to perceive women not only as weaker and less developed (primitive), but the reason why the spirit had fallen into matter and evil. Eve's seduction of Adam subsequently explained not only the expulsion from Eden but the destructive forces of nature. An Irish poet put it this way:

I am Eve, the wife of noble Adam; it was I who vilated Jesus in the past; it was I who robbed my children of heaven; it is I by right who should have been crucified... It was I who plucked the apple;... there would be no hell, there would be no grief, there would be no terror but for me. (A Golden Treasure of Irish Poetry: 600-1200, in Lerner, 1993, p.142)

Women in the Evolving Christian Society

During the Middle Ages, institutional public authority (church, state) was severely limited; private life which was, in fact family life, was everywhere (Duby, 1985). Women, although subordinated to men, were important to society and in some instances influential (Parker, 1984; Achterberg, 1990). Women's social activities and authority were determined by the circumstances of birth and of necessity as by gender. Women shared the authority of their men; the lady of the house also 'dominated' (Duby, Barthelemy, La Ronciere, 1985). In their husbands' absence wives acted as hostesses, ran

the estate or business, and dealt with their husbands' and families' legal disputes. Old patterns of dualistic relationships were also evident in society's emerging social institutions, where women also assumed positions of authority and acted in men's absence. The priestess officiated at weddings and festivities in the absence of the priest; the lady of the manor was often the unofficial doctor of the village. The example was followed by wives of wealthy burghers, their wives and daughters were routinely incorporated into their family's enterprises (Parker, 1984; Walker, 1984; Wyman, 1986). At the lower end of the social scale women shared their husband's occupations. Fishwives, ale wives, applewives, oyster wives, etc. were titles which designated their economic function as well as their social position (Keller, 1985, p.63). Typically husbands and wives worked together, apprentices served both, and widows carried on the business (Wyman, 1986). There was no trade closed to women by law.

As society became better organized, the church's theological principles became a prescription for Christianizing society. Contradictions arose between women's authority and influence and the biblically based patriarchal doctrines of the Church. In order to resolve those contradictions, the Church began to assert its priestly authority, to impose its view of the cosmic order on social institutions and life styles. In the twelfth century, the Church's position on women's social roles was made clear with the official declaration that "... 'Women's authority is nil; let her in all things be subject to the rule of men... And neither can she teach, nor be witness, nor give guarantee, nor sit in judgement.'" (Parker, 1984, p.49). The church's requirement for male domination would, in time, undermine

the established patterns of cooperation between the genders and of dualistic social relationships.

By projecting their ecclesiastical hierarchy on heaven, their notions of Christianity and of civilized society appeared to be ratified in divinely reflected approval or its theology and doctrines. Subsequently the vestiges of antiquity's goddess were reduced to a virgin. Emphasis on Mary's virginity undermined the power of goddesses like Hera and Demeter and diminished the importance of the iconography of fertility (Parker, 1984; Walker, 1984). New ideals of obedience and compliance, consistent with women's chastity and with men's rightful control of women's fertility, were given expression in the representations of Saint Margaret, the patron saint of childbirth. Rituals of childbirth, from which men had been excluded, were made public, embroidered on the backs of the priests' robes. These representations in the *Opus Anglicanum* (Circa. 900-1500) presented reproduction and childbirth in such a way that women's power and significance were circumscribed - "... repeated apocryphal scenes of birth - midwives and all - were prevented from endowing earthly women with power and importance because Mary remained above all, the Virgin" (Parker, 1984, p.59).

During the Renaissance, women's lives became markedly more restricted and circumscribed as sex, rather than class or necessity, became the primary determinant of women's social behavior. New, powerful links between ideals of femininity and domesticity, and by inference between masculinity and culture, were forged with the emergence of a clearly defined separation between the domestic sphere for family, love,

and intimacy and the public sphere for money and business (Parker, 1984). Established ideologically within the discourse on sexual differences and materially by changes in the economic and social arrangement of European society, the assertions of women's femininity provided an opposite against which men's dominance could be defined and legitimized. For the church, so long as women's bodies were devoted to birth and home, women were different from men. By supporting the distinctions between masculine and feminine, the Church's distinctions between matter and spirit were not only validated and preserved but given concrete expression in the relationships of everyday life and in the structure of the family.

For the nobility, the celebration of femininity meant that their women were to abandon previously sanctioned activities associated with masculinity (i.e., handling weapons, riding, playing tennis, wrestling, and studying) and to assume those more appropriate to women such as music and embroidery (Parker, 1984, p.63). A soft, subservient, delicate, tender, graceful creature testified to her family's status and financial position. Domesticity ensured that women remained at home unspoiled by the temptations of the world; thereby ensuring women's chastity and in turn the honor of her family (Ibid, p.75). Her ignorance of book learning reflected her sweetness and innocence.

Within the merchant and artisan classes tighter regulations and more hierarchical organizations worked to exclude women from positions of responsibility and prestige. The model of the merchant's wife was a curious combination of the appearance of

nobility with the industry or activities of the laboring classes (Parker, 1984). Hardly a woman of leisure, the domestic ideal of the burgher class was one of a woman who cooked, cleaned, sewed, waited on her husband and cared for her children (Parker, 1984, p.63). Gradually, as women's economic functions were restricted to that of a housewife, the stage was set for women's financial dependence and for it to be accepted as her "natural state" (Keller, 1985, p.63). Subsequently, motherhood, rather than midwifery was more compatible with the urban middle classes ideals of femininity and domesticity.

Viewed as an unclean profession which required technique (skill) rather than science (learning), the practice of midwifery had become increasingly more compatible with the activities of the lower classes (Rich, 1986). This social shift was ratified by the changing images in ecclesiastical art. After 1500, the Apocryphal midwives, once widely represented in the embroidery of the Opus Angelicanum, were banished from the backs of the priests' robes (Parker, 1984, p.56). The persona of the midwife ceased to receive the ideological/theological ratification inherent in its representation of sacred art. In her place were representations of the Virgin and of female saints who were increasingly portrayed in sacred art as young mothers devoted to their infants. Although the Virgin was still enthroned, she was a young woman who smiled as she breast fed her baby. "Her gentle nurturing qualities are placed above her queenly characteristics. Childcare, not childbirth, was becoming a central cultural concern." (Parker, 1984, p.65)

When Alchemy Became Witchcraft

Despite the midwife's diminished status, the event of birth remained in the hands of women, and the midwife continued to represent female regenerative power and women's control over reproduction (Parker, 1984; Merchant, 1989). Women conceived repeatedly, birth routinely caused the assembly of an all female group, and the management of birth typically involved the use of sympathetic magic. For men, birth represented an autonomous female event, which in a patriarchal society "... has always been seen as a potentially dangerous or hostile act, a conspiracy, a subversion, a needless grotesque thing..." (Rich, 1986, p.105). No one doubted that the midwife possessed not only mechanical knowledge of birth but knowledge of sympathetic or natural magic which allowed her to intervene to ease the pains of birth, to hasten delivery, or to ensure the outcome.

... and birth was accompanied by elaborate ritual, sometimes involving sympathetic magic. Midwives attending the birth rubbed oils on the woman's belly,, tossed her in a blanket to speed delivery. Herbal aids like ergot to dilate the cervix were employed by midwives. All pins would be removed from the room, all doors, cupboards and drawers in the house opened and all knots untied. (Parker, 1984, p.55)

The church fathers regarded all of this with deep suspicion. Not only was the midwife, in the context of a patriarchal society, acting as a man, she, by use of magic to affect natural processes and human events was acting as an alchemist, a learned representative of the privileged classes. From the perspective of the church, there was a

great potential for heresy and for social chaos if individuals, particularly women and subordinates, could understand the nature of the world for themselves and manipulate its spirits by magic (Merchant, 1989). In a rigid hierarchical and increasingly patriarchal society, the midwife was simultaneously a social contradiction and a theological abhorrence. A symbol of disorder in nature and of chaos in society, the midwife became a witch, an object of contempt, and an inherently dangerous contradiction which needed to be brought under the control of men and the church.

The witch, taken seriously as having effective powers, provided a natural focus for anxiety. What as philosophically and theologically disreputable in the alchemist was directly culpable in the witch. ... she represented precisely the invitation of Satan that is born of unbridled sexuality. (Keller, 1985, p.59)

When the church discovered that the common folk neither understood the doctrinal subtleties of heresy nor cared about the theologians' debates with the alchemists, accusations of witchcraft and the prosecution of witches simultaneously made otherwise esoteric debates relevant to the public mind and theologically obscure doctrines applicable to their social behavior (Walker, 1983). In order to purify society, the church fathers fostered the public perception that witches under the devil's guidance were engaged in a vast conspiracy to overthrow the Church and Christian civilization. In order that the Mystical Body, which included not only the priesthood but all members of Christ's Church, would be pure enough to perform its divine functions, diseased members, heretics, had to be eliminated (Daly, 1978, p.186). And, while this argument clearly legitimized the excommunication and burning of anyone the Church's inquisitors

found in conflict with its doctrines and teachings, it was particularly useful for the control of women who were perceived as deviant and out of control.

When the Inquisition was reconvened at the end of the fifteenth century, women were, as the title of the Inquisitors' authoritative work on demonology, Malleus Maleficarum, suggested, an already identified target for accusations of heresy and witchcraft. Its Dominican authors contended that being female predisposed women to being witches; this was evident by the fact that the word female was itself composed of the words 'fe' meaning faith and 'minus' meaning less (Achterberg, 1990). And, the term 'maleficarum' was the feminine form for evil-doer or witch (Daly, 1978).

To conclude. All witchcraft comes from carnal lust, which is in women insatiable. See Proverbs xxx: There are three things that are never satisfied, yea, a fourth thing which says not, It is enough; that is, the mouth of the womb. Wherefore for the sake of fulfilling their lust they consort even with devils. More such reasons could be brought forward, but to the understanding it is sufficiently clear that it is no matter for wonder that there are more women than men found infected with the heresy of witchcraft. And in consequence of this it is better called the heresy of witches than of wizards, since the name is taken from the more powerful party. And blessed be the Highest Who has so far preserved the male sex from so great a crime; for since He was willing to be born and to suffer for us, therefore He has granted to men this privilege. (Kramer and Sprenger, 1486, p.47)

All women because of their insatiable sexual appetites were considered to be prone to the temptation of consorting with the devil, thereby re-enacting Eve's original sin. Women who had special skills which enabled them to live like a man, free of direct (domestic) controls, capable of independent thought (spirituality) and independent (public) action, were disproportionately accused of witchcraft. Singled out for special

attention and scrutiny were women healers, particularly the midwives. These women were the keepers of an ancient, pre-Christian tradition of domestic medicine and the practical secrets of generation, and included the ability to intervene on the supernatural as well as natural plane of existence. Often perceived as an enchantress, as well as a lower type of medicus, the midwife, while still firmly in place and in great demand, more and more became a shocking and disreputable figure (Flint, 1989; Achterberg, 1990; Parker, 1984). Unlike the supernatural healing of the saints, it was the view of the Church that the enchantress' ability to exercise supernatural curative powers was dependent on keeping company with demons, evil angels, rather than God and his heavenly angels.

Capitalizing on the wide spread, medieval beliefs in demons, the Church was able to categorically designate all disapproved practices and interventions to various types of relationships between man and demons (Flint, 1989). According to the authors of the *Malleus Maleficarum* (1486), "... No one does more harm to the Catholic faith than midwives. For when they do not kill children, then, as if for some other purpose, they take them out of the room and, raising them up in the air, offer them to devils (Kramer and Sprenger, 1486, p.66)." Specifically identified were seven means by which midwives engaged in witchcraft to influence copulation, conception, and development of the child:

Now there are, as it is said in the Papal Bull, 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; fourth by changing men into beasts with their magic act; fifth by destroying the generative force in women; sixth by procuring abortion; seventh, by offering children to the devils,

besides other animals and fruits of the earth with which they worked much harm. (Kramer and Sprenger, 1486, p.47)

In 1591, the historical records show that Agnus Simpson, a midwife, was tried and burned at the stake for giving a woman in labor laudanum (opium) to relieve the pains of birth (Rich, 1986, p.128). One amongst many, her "crimes" were typical in that she eased the pains of labor and utilized a technique, the mechanisms of which were not obviously mechanical and were therefore possibly magical. According to the teachings of the church, childbirth was a sign of women's sinfulness and her birth pangs were God's punishment for Eve's transgression (Achterberg, 1990). And, although the church scholars were unable to clearly distinguish between what constituted medicine, a natural science which was impregnated with the breath of God and what constituted magic, a diabolical art, they generally concluded that women's use of stones, herbs, animal parts, incantations, or divination was the practice of magic/sorcery. Given women's inferior status and fallen nature, and their ability to cure without studying the scriptures or ancient texts, the church's position was that women's knowledge could only have come from the devil. Whether or not incantations and prayers or even the workings of herbs and patients were viewed as diabolical or divine increasingly depended on who administered them rather than what was being performed.

Regulation of Midwifery

As the Sixteenth Century drew to a close the ancient role of the midwife as a medicus for and a teacher of women was changing, she was becoming both an agent of the church responsible for the propagation of Christian belief and for the souls of infants, and an agent to the (Christian) state responsible for certifying women's virginity and the reporting of illegitimate births (Donegan, 1978; Donnison, 1977; Forbes, 1962). By adapting the medieval practice and extending it to the practice of the midwife, the Church and/or the state placed the most prominent of the women healers under the supervision of men (Wyman, 1986; Forbes, 1962). Midwives were admonished, under the threat of severe punishment, not to perform abortions and instructed how to properly dispose of stillborns and the by-products of birth so that they could not be appropriated by witches for evil or occult purposes, and how to properly baptize a vulnerable infant.

While the witch trials provided a mechanism for publicly identifying undesirable practitioners and evil practices, licensing created a mechanism which publicly identified those women who were, in ecclesiastical terms, competent to practice midwifery.

Although civil authorities tended to place more emphasis on the skills of the midwife, and ecclesiastical authorities tended to be more concerned about women's character and religious convictions, the content of the regulations were remarkably consistent for over 300 years throughout Western Europe. The Wurzburg Synodal Statutes of 1491, addressed the training of midwives, their availability to the poor, and consultation with physicians, but primarily it stressed the prohibition of superstitious sayings and provided

specific instructions for the disposal of the by-products of birth so that they did not fall into the hands of witches to be used for ungodly purposes (Forbes, 1962). The city of Heibornne admonished both midwives and women in labor not to employ magic or superstitious words, acts, or gestures; and a similar ordinance in Regensburg specified that midwives who employed magic or superstitions were to be beaten. In England, the bishops as well as the representatives of the monarch made regular inspections in order to determine "...whether you knowe anye that doe use charms, sorcerye, enchauntments, invocations, circles, witchcrafts, sooth sayings, or any lyke crafts or ymaginations invented by the Devyll and specyalle in the time of women's travayle" (Donegan, 1978, p. 11-12). And, once the Act of 1512 was extended to the practice of midwifery, midwives like other practitioners (surgeons, apothecaries) who were not licensed by Oxford or Cambridge University, were required to apply to the Bishop's Court for examination and licensure. Those found guilty of practicing without a license were subject to fines and/or excommunication.

With the institutions of licensure came the practice of requiring the midwife to take an oath. In France, midwives were required to promise never to use "...superstitious words or signs" (Forbes, 1962, p.280). In England the oath taken by midwives was, in fact, a restatement of the church's theological realities and the state's social prohibitions. While the content of the oath exemplifies the wedding of the interests of the church and state which underwrote their regulation of midwifery, the act of taking the following oath

would encourage the midwife to incorporate the underlying truths and to make compliance with the regulations a matter of individual conviction and conscience:

I, Eleonor Pead, admitted to the office and occupation of midwife, will faithfully and deligently exercise the said office according to such cunning and knowledge as God hath given me: and that I will be ready to help and aid as well poor as rich women being in labor and travail of chid, and will always be ready both to poor and rich, in exercising and excuting of my said office. Also, I will not permit or suffer that woman being in labour or travail shall name any other to be the father therof; and that I will no suffer any other body's child to be set, brought, or laid before any woman delivered of child in the place of her natural child, so far forth as I can know and understand. Also, I will not use anykind of sorcery or incantation in the time of travail of any woman; and that I will not destroy the child born of any woman, nor cut, nor pull of the head there of, or otherwise dismembered, by any manner of ways or means. Also, that in the ministrations of the sacrement of baptism in the time of necessity I will use apt and the accustomed words of the same sacrement... And that in... pouring water upon the head of the same infant, I will use pure clean water, and not any rode or damask water, or water made of and confection or mixture... (Strype, 1824, p.242-3, in Forbes, 1962, p.279).

The Social Ascendancy of the Medicus

As the practice of women healers generally and the midwife specifically were being circumscribed by regulation and by the requirements of licensure, the opportunities for the male medicus were increasing. Unlike either the saint, the enchanter, or the midwife, the male medicus (barbers, surgeons, apothecaries, and physicians) was perceived in human terms. They were God's servants and their particular expertise was located in the realm of the natural world and manifested in knowing which species to collect and compound or how to mechanically manipulate the body in order to treat a

particular illness (Flint, 1989). Consequently, the male medicus evoked less theological suspicion and less ecclesiastical scrutiny; they were well positioned to incorporate various aspects of women's healing tradition as their own. The university educated physician-priest became not only the only legitimate interpreter of the signs and symptoms of illness according to the principles of Galen's humoral physic (Harley, 1993); but the only legitimate source of medical divinations and incantations (Achterberg, 1990).

The witch trials also opened the door for the guilds of barbers, surgeons, and apothecaries to exclude women and to appropriate various aspects of women's role of preparing and administering nostrums and herbals. The barber-surgeons, who since the thirteenth century had the exclusive right to use surgical instruments, were increasingly able to enforce their monopoly and began to assume an increasingly active role in the management of complicated or abnormal births.

Evolution of Biomedicine and Its Birthing System - Obstetrics

The Walled in Universe of the High Middle Ages

The wedding of faith and reason had resulted in the nearly universal convictions that there was a single, true rational account of man, of the universe, and there existed an omnipotent, provident God who ruled His universe by delegating His authority to a hierarchy of spiritual beings. In fact by the time Dante (1265-1321) wrote the Divine Comedy, Ptolemy's geocentric world picture and the Hermetic tradition had been Christianized. The astral religion of Orthodox Christian theology and the astral science of the ancients' natural philosophy were so tightly interwoven that the revelations from the Bible and the speculations about nature formed a mutually reinforcing system of categories and concepts (Boorstein, 1982; Burckhart, 1967; Koestler, 1959; Erickson, 1976; Merchant, 1989). These categories and concepts dominated the popular and literary view of the universe and provided the common sense basis for harmonizing the axioms of philosophy, theology, and religion with the accepted organic worldview.

Christian saints and a hierarchy of angels had replaced the Greek gods in the firmament, and the monotheistic God of the Old Testament and Christianity occupied the realm of the Empyrean (Burckhart, 1967). The heavenly spheres had acquired spiritual meaning. Distant stars and wider spheres were understood to be purer, less conditioned, and more divine. Gradation of the spheres reflected the perceived hierarchical order of

the universe; and in the government of the universe, a given entity or being had domination over those below it and served those above it in the scale of being (Mason, 1951). The basic measure of time was provided by the firmament of fixed stars. Beyond the firmament in the realm of God (Universal Spirit, the Creator of all things, First Cause, Divine Will) discursive knowledge bounded by form dissolved into undifferentiated and immediate vision, time dissolved into eternity, the part rejoined with the whole - the invisible present of His eternal existence (Burckhardt, 1971; deGivry, 1931; Eliade, 1982).

The sublunar regions of the cosmos contained God's creation and was the place where the fundamental elements of earth, water, air, and fire made material existence possible (Merchant, 1990). In contrast to celestial existence, the material existence of the sublunar regions was characterized by temporality, multiplicity, opposition and estrangement. Natural terrestrial motion was represented as linear with a beginning and an end rather than continuous and circular like celestial matter (Mason, 1959; Koestler, 1959). Still things below were understood to correspond with and to obey the same physical and psychological laws as things above.

Man, however, was not viewed simply as an inhabitant of the earth, but as a microcosm, a miniature replica of the celestial spheres, linked to the animals below by virtue of sensations and to the angels above by the capacity for knowledge of God. Therefore astrology was applied not only to the heavens but to man; and the signs of the seven planets and the twelve signs of the zodiac were understood not only to influence

man and his affairs but to be represented in man, his body, his society (deGivry, 1931; Pouchelle, 1990; Onians, 1951). These correspondences between astral relationships, the planets and zodiac signs and man (i.e., body, organs, forehead, face, hand) provided a language for talking about the causes and effects of time as well as the basis for the occult arts of prediction - astrology, and divination

The stars, then mark the division of time, but they are likewise "signs". Signs of what, if not of the events which may happen in the Macrocosm as well as in the Microcosm? And since in the divine plan past, present, and future make but a single instant, it follows that all the future is written in the stars for the one who knows how to read. (deGivry, 1931, p.223)

Once the Christian Trinity was firmly enthroned beyond the angels in the Empyrean, the universe was capped. Since nothing existed beyond God, nothing was possible beyond God. God was absolute reality; therefore everything else was simply a sign or an expression of His will as it was manifested in time and space. Analogy, then, provided a reliable means by which knowledge of both the macrocosm and the microcosm could be discovered. Part of the ancient Hermetic tradition, the methods of allegory had been used by the Greek philosophers, Arab scholars, and the Alchemists to derive practical knowledge from nature and to acquire spiritual insights and wisdom from the experiences of life (deGivry, 1931; Medieval Wisdom, 1994). Subsequently, allegory became the basis for the sacred science of theology and the means by which the symbolic significance of Scriptures could be discovered providing illustrations of "right" faith for the theologian and of "right" behavior for the preachers of morality (Baldwin, 1971).

Metaphorically, the body politic and the body human were little worlds similar to the universe. Christian doctrine taught that God had made himself known to man through two texts, the "Book of Nature" or the created world and through Holy Scripture in which God communicates His Word and Will through the writings of inspired authors and the words of Christ (Miller, 1977). Properly interpreted Scriptures were considered the ultimate authority in all matters; the ancients, Hippocrates, Aristotle, Ptolemy, Galen, however, were highly respected as observers of the physical details of the natural world. Together the Bible and the writings of the ancients, particularly Aristotle were thought to embody the known and the knowable. They comprised the accepted sources for the premises (a priori assumptions) upon which the allegorical methods of the scholastic philosophers could speculate upon in order to derive new understanding of God and the great world of the macrocosm and of God's plan for man and the little world of the microcosm (Casti, 1989; Miller, 1977; Boorstein, 1983; deGivry, 1981).

For most, the universe remained a closed system, tidy, man measured, and man centered (Rice, 1959). Even though the rediscovery of Aristotle's science initially changed the intellectual climate of Europe by encouraging the study of nature, the scholastics soon treated these texts much like they had always treated the Scriptures. Science was the verification of the known rather than the discovery of the unknown; therefore Aristotle was always "right" (Pouchille, 1990). And, most scholastics considered rendering a more accurate translation of the best Greek text rather than

undertaking a re-examination of a particular natural phenomenon the best way to contribute to knowledge (Boorstein, 1983).

The Neoplatonism of the High Middle Ages transformed Aristotle's hypothesis into dogmas and Plato's visions into theology (Koestler, 1959). Accepted literally, Aristotle's physics became metaphysics and there was never much chance that the new interest in nature that the discovery of Aristotle's science had evoked was ever going to produce new knowledge. Like the astrologers and alchemists, Aristotle thought in terms of affinities and correspondences and reasoned deductively from analogies which were typically metaphorical, allegorical or purely verbal (Boorstein, 1983; Koestler, 1959). Unconscious yearnings for stability and permanence made change an ominous event, and progress virtually synonymous with degeneration (Koestler, 1959). The history of creation, whether told by Plato or the Church Fathers was a story of descent and degeneration - the successive emergence of ever lower and less perfect forms of life. Aristotelian physics was a stable system describing a stable world where the natural order of things was unchanging and unchangeable. In this world everything was at rest, nothing moved unless it was pushed, an act, ultimately attributed to Aristotle's unmoved mover, Aquinas' God.

Professionalization of Medicine

Since ancient times, the majority of those who treated the sick were medical craftsmen who had learned their skills as apprentices to other practitioners. Only a very

few received formal medical training or had studied medicine as part of the liberal arts (Baldwin, 1971). In the early middle ages, however, the practice and teaching of medicine began to shift to the monks and into the monasteries. The medicus, the practitioner who possessed both medical knowledge and surgical skill, was most often a regular priest who had taken holy orders. The monasteries not only possessed most of the schools and hospitals, but the medical texts of Antiquity of the Low Empire which were preserved after the Fall of Rome were also found there (Pouchelle, 1990; Baldwin, 1971). By the eleventh century, monastic medicine was at its height; but medical practice was no longer compatible with the Church's expectations that monks live as their Rule prescribed. In 1130, the Council of Clermont forbid monks from practicing either medicine or civil law for monetary compensation (Magner, 1992, p.106). In 1163, the Council of Tour issued specific prohibitions against monks practicing surgery because the shedding of blood was incompatible with their ecclesiastical status (Pouchelle, 1990, p.20). Shortly thereafter, the prohibitions were extended to the practice of medicine generally. Despite continued resistance, the care of the human body was gradually taken over by laymen.

Socially operative categories of purity and pollution had provided the basis for splitting the healing arts into branches of medicine and surgery (Heer, 1961). In the twelfth century, some of the medical doctors began to call themselves physicians; a term which not only distinguished them from the majority of medical practitioners, but established a bond between medicine and science (Baldwin, 1921, p.70). With the

professionalization of medicine in the thirteenth century, the splits between medicine and surgery and between educated and uneducated practitioners were further elaborated and institutionalized. At the newly founded University of Paris, the doctors who engaged in the theoretical or academic study of medicine were designated as "physici"; and with the foundation of the Paris Faculty of Medicine and the creation of the Company of Physicians, the separation of medicine and surgery crystallized (Pouchelle, 1990).

The two branches of the healing arts, medicine and surgery, evolved separately for the next several centuries. Physicians became the medical elite, theoreticians who studied and interpreted the classical texts of Hippocrates, Aristotle and Galen, and engaged in abstract, metaphysical speculations about the elements and humors and their relationship to various symptoms and diseases. Like the scholastics who emphasized formal logic as the primary criterion of truth, physicians emphasized the proper relationships or grammar among the humors and the elements as the basis for identifying and for restoring harmony (health) in a disordered (diseased) system. The surgeons, even those with formal medical training, were more often empirics who relegated metaphysical speculation to second place. The metaphors of the surgeon were more often mechanical or instrumental in nature, creating images and associations which pointed toward a mechanistic view of the body (Pouchelle, 1990). Their anatomical knowledge allowed them to enumerate parts of the body and their mechanical or technical skills allowed them to utilize tools to set those parts in order. In her analysis of Chirurgie by the 14th century doctor-surgeon, Modeville, Pouchelle (1990) observes:

Thus the vast majority of analogies relating to the 'body as device' refer to the anatomy of a healthy body, as is the case also with expressions which see the body in architectural and domestic terms; in contrast, vegetable, and especially animal images refer rather to a state of sickness (Pouchelle, 1990, p.107).

While there remained a few educated doctor-surgeons it was the barber-surgeon and other practitioners such as the apothecaries, bone-setters, and midwives who engaged in the practical work of medicine. Like other artisans, they were typically uneducated, manual workers forced to live on the wages they earned for their labors. Their social status was further degraded by their awful polluting contact with blood: Consequently there was little collaboration between medical academies and artisans (humanists vs technologists). It was, however, among the marginal social and ethnic groups of Western European society that the natural sciences thrived. Practical mechanics was the domain of men of the lower orders, manual workers who engaged in the "illiberal arts" rather than the "liberal arts" (Heer, 1961, p.305). During this period, the major advances in the practice of medicine were the achievements of the army doctors, surgeons, who were held in contempt by the university physicians.

The Cosmos Becomes a Clock and God Becomes the Perfect Clock Maker

Scholastic philosophy was in decline. Aquinas' synthesis of faith and reason, and therefore theology and philosophy had broken down. After Aquinas' death, some of the elements of his synthesis were condemned by ecclesiastical authorities. Theologians at

Paris rebuffed philosophy; while at Oxford, there was a rethinking of the very basis of logic and philosophy, opening every branch of practical and speculative theology to demolition and reconstruction. The links which had connected theology and philosophy were broken, making it more and more difficult to hold faith and reason together (Baldwin, 1971). Even though the break was never complete within the Catholic Church and was in large part restored by the Catholic theologians and philosophers of the counter-reformation, new systems separated theology and philosophy. The ancient outlook on philosophy as a single common way of viewing the universe ceased to exist (Knowles, 1962, p.339).

The erection of logic and dialect as the training and method for every intellectual discipline divorced thought from life (Knowles, 1962). Consequently, life experience and the physical universe no longer supplied the philosopher with the impetus for thought; and the Bible and traditions of the past played a smaller and smaller role in the interests of the theologian. Both the philosopher and the theologian of the fourteenth century had withdrawn into their own esoteric world of ideas, their definitions and conclusions were no longer controlled by other types of human experience, and were less relevant to life in the world. Ideas and principles were strained to the limit; thought, alienated from experience had become fragmented and self-destructive. Gradually, interests began to shift from metaphysics and the search for abstract, general principles to knowledge of the individual and direct intuition of reality.

The medieval view of the world had been embodied in the Church's Christian theology and a Neoplatonic vision of the ancient's Natural philosophy. They were so tightly interwoven that the revelations from the Bible and speculations about nature formed a mutually reinforcing system of categories and concepts. That which was sacred also seemed natural, and that which was perceived as the natural order of things was typically attributed to God's creation (Erickson, 1976; Merchant, 1989). However, once the metaphor of the machine began to replace the metaphor of organism as the theme which informed and unified Western notions of the cosmos, society, and self into a single cultural reality, the medieval worldview and its supporting intellectual and social structure began to decay, bit by bit over the next three and four centuries.

Knowledge, however, was yet to be disassociated from faith and the creators of the "new science" still responded within the framework of theology (Jacobs, 1970; Mason, 1953; Shapiro, 1969). Natural philosophers, therefore, were compelled not only to devise new, better representations of reality but to reconcile their new empirical science and its analytic modes of the natural world with the foundations of Christian belief. Unlike the Catholic Church, the new Protestant sects were not dependent on Ptolemaic cosmology for either their structure or legitimacy. The thinking of Calvinists and the astronomers had proceeded along similar lines, preparing the way for a new mechanical-theological worldview which would prevail during the seventeenth and eighteenth centuries (Mason, 1953).

The processes of decay and the seeds of reconstruction were irrevocably set into motion by Protestant reformers who criticized the theology of the Church and by natural philosophers or early scientists who criticized the prevailing Neoplatonic models of the universe, its traditional authorities and its animistic representations of reality (Mason, 1953; Boorstein, 1983; Dubos, 1961). In the development of the new sciences and the new theologies, the criticisms of Protestant Reformers and the astronomers proceeded along the same line. Each in their own realm undermined the principle of hierarchy, "...the kernel of the idea of the medieval world picture..." (Mason, 1953, p.30). In the end, the graded chain of being which ranked species by their relative degree of perfection or qualities dissolved. The relationships of domination and servitude between species which had sustained the order and integrity of the universe were destroyed. The orders, genera, species, and individuals remained but there was no longer a flow of power from the higher to the lower classes or species (Mason, 1953).

Criticism of Hierarchy

The Protestant reformers and the early modern scientists took exception to the notion that the natural order of the universe was hierarchical or that it was made up of a graded chain of being (Mason, 1953). Calvin opposed the ecclesiastical hierarchy of the Church and argued that there was no legitimate basis for comparisons between earthly and celestial hierarchies. In Calvin's view, the universe was orderly and fully determined. God governed directly as an absolute power rather than by delegating his authority to a

hierarchy of spiritual beings. Miraculous happenings which contravened the laws of nature were no longer possible since He had predetermined all events from the beginning and governed by means of decrees, the laws of nature, which were altered for no one.

While Calvinist theology was evicting the angelic beings from the government of the universe and moving towards an absolutist theory of cosmic rule, early modern scientists were effecting a similar transformation in natural philosophy. Copernicus' heliocentric system not only displaced the earth from its stable unmoving position at the center of the cosmos, but implicitly rejected the gradation of elements by assigning to the earth circularity of motion (Mason, 1959). Here-to-fore circularity of motion was a quality of celestial matter while the property of gravitation was considered unique to earth.

Thereafter the earth was similar or equal to other planets, rather than inferior. And once the sun assumed a position at the center of the solar system, the hierarchical view that higher celestial spheres influenced the motions of the lower spheres was rejected.

Effects on the Microcosm of the Body

The transition from hierarchical to an absolutist conception of cosmic government affected the perception of the little world of the human body. Here, the Protestant Reformation and the scientific revolution came together in the discovery of the circulation of the blood (Mason, 1959). Servetus disputed both the Doctrine of the Trinity and the general principle of Triadic classification, particularly the notion that the human body was governed by a three fold hierarchy of spirits or two types of blood

(Mason, 1959). Rather, he claimed that there was only one type of blood and one spirit which was the soul of man in the blood. Concerned primarily with the blood and the atmosphere, Servetus' theory of circulation was limited to the circulation from the right to the left chambers of the heart.

It was Harvey who ultimately evolved an absolutist theory of government of the microcosm. Perceiving the heart as a mechanical pump rather than a furnace or heater, Harvey accorded that blood circulated not only through the heart but through the body. He attributed the circulation of blood through the body to the heart's pumping action, an attribute here-to-fore considered unique to celestial bodies (Mason, 1959).

Despite the scorn for those who cast the Creator of the Universe in man's image, the theologians never ceased to scrutinize man's own handiwork as their clues to God. Now man was a proud clockmaker, a maker of self-moving machines. Once set in motion, the mechanical clock seemed to tick with a life of its own. Might not the universe itself be a vast clock made and set in motion by the Creator Himself? (Boorstein, 1983, p.71)

The theological doctrine of predestination prepared the way for the philosophy of mechanical determinism. For Descartes the clock was the prototypical machine; mechanical components replaced the organic, animistic bonds which had connected human thought with action, as well as humans with nature and the heavens allowing the angels and saints to manifest God's goodness in the world (Erickson, 1974; Onians, 1951; Flint, 1989; Boorstein, 1983). Once separated from the animal body, the mind-soul, like God, Himself, became an external operator. And, the body, like nature, was no longer enlivened by an animating spirit, but was transformed into an "incredible machine"

(Merchant, 1989). There was no difference except in the intricacy between the operation of the human body, of a tree, or of a clock; everything in nature could be explained by atoms, minute invisible particles in motion and interaction. Descartes separation of the mind/body generalizes the earlier separation of spirit/matter in the macrocosm to the microcosm of the human body. And, he facilitated scientists application of the same physio-chemical laws that operate in the inanimate world of lifeless systems to the study of the structure and function of living things (Dubos, 1961).

Modern Scientific Thought

After the Renaissance the medieval worldview began to unravel. Copernicus' hypothesis was confirmed by Galileo's observations and described by Kepler's mathematics. Once the earth was dislodged from its central position in the cosmos, the universe began to resemble a machine, a clock, an engine, rather than an organism; and God was increasingly portrayed as an artisan, an architect, a grand engineer, or geometer rather than as a parent or father. Somehow it suddenly seemed possible that God's universe could be understood as similar to the mechanical reproductions of man and that the purposeful activity of man could be considered a model for the processes of nature (Jacob, 1982). God's purpose for man, and man's view of his place and purpose in the universe was no longer revealed in the various representations of the Ptolemaic system (Shapiro, 1969; Barrett, 1986). Acceptance of the metaphor of the clock not only moved God outside his creation, it undermined Aristotle's premises that nothing moved unless it

was continually pushed, which removed God from the World once He gave the world its initial shove. Subsequently, God was effectively portrayed as an architect, an engineer, or a geometer rather than a parent or father. And, investigations of physical causes began to replace speculations about cosmic relationships (Jacob, 1973). Mathematical formulas and mechanical models were no longer scholastic conveniences but representations of reality. Man had discovered the nakedness of his senses as well as the nakedness of his body. Once scientific knowledge was the product of complicated instruments and subtle calculations, things were no longer what they seemed (Boorstein, 1983, p. 294).

Common sense axioms, the foundations of everyday life and experience, could no longer serve for the governance of the world. When investigations of physical causes began to replace speculations about cosmic relationships, knowledge derived from experience and observation (the mechanical arts) appeared to be more reliable and meaningful than knowledge acquired from exegesis of the Christian Gospels or from the writings of Aristotle, Hippocrates, or Galen (the liberal arts) (Dubos, 1961). And, once rationality began to replace animism, the participating of the medieval mind, consciousness, changed (Jaynes, 1976; Boorstein, 1983; Erickson, 1976). The door had opened to autonomism and individualism, changing not only the basis upon which objects of perception (percepts) were translated into mental entities (ideas, concepts, theories) but the basis upon which social life and psychological identity were organized (Risse, 1992; Jacobs, 1970).

Probing into the fabric of the human body led to the conclusion that Galen's anatomical representations and physiological explanations were erroneous. Galen had not fully considered the ways in which the anatomy of a human, a pig and a monkey could differ, nor were those differences truly critical so long as medical practice was based on speculations about physiological rather than objective anatomical systems. Prior to Vesalius and the revival of dissection, anatomical illustrations were often inaccurate, debased copies of figures, but they were often symbolic, intended to convey something other than anatomical information (Roberts and Thomlinson, 1992). New representations of the human body, like Copernicus' universe, revealed neither animating spirits or divine design or purpose. Rather, they revealed a body composed of discrete anatomical systems and organs, the "incredible machine" whose discrete anatomical systems of organs and structures were appropriate to their particular physiological functions (Roberts and Tomlinson, 1992).

Progress

Descartes' ideas dominated the new mechanistic thinking in Western Europe. However, it would be Bacon (1561-1622) who would permanently undermine Aristotelian science and authority and establish the new materialistic view of the world and mechanistic science as the wave of the future. As the Body of Christ was being transformed into the Kingdom of God, the basis of cause and effect arguments were

shifting from theory to practice and Bacon was awakening Europeans to the possibilities of science (Casti, 1989; Schiebinger, 1989; Merchant, 1989).

Science provided man a means to dominate and control nature by changing the scientist's fundamental questions from ones about origins (whys) to ones about mechanisms (hows) (Dubos, 1961; Boorstein, 1983; Jacobs, 1983). By proposing that it was necessary to begin investigations with specific repeated observations rather than with the conclusion about what specific facts meant or represented, Bacon simultaneously challenged the traditional authority of Aristotle and the scholastic's habits of deductive reasoning and this shifted the basis of knowledge from theoretical speculation to observation and experiment. Data from the senses took precedence over the ideas of the mind. Truth was essentially equated with utility and knowledge became more or less synonymous with the power to act in or to change the world (Barrett, 1986; Dubos, 1961).

Thereafter, progress was more or less equated with man's ability to establish domination over nature. Bacon's scientific philosophy had been rooted in the Christian doctrine of original sin. He proposed that mankind could use science to reestablish the domination over nature that had been lost in the Fall, thereby recovering, in part, Adam's primal state of happiness (Dubos, 1961, p.22-32). By acquiring knowledge of mechanism, which according to Bacon was best identified through precise techniques of experimentation because "...the nature of things betrays itself more readily under the vexation of art than its natural freedom..." (Bacon in Dubos, 1961, p.24). Systematic

application of knowledge derived in this manner provided "...a general method by which problems could be solved at will, thus permitting a progressive and continuously increasing mastery over nature..." (Dubos, 1961, p.32).

Therefore, it appeared that if God could construct the perfect world by adhering to predetermined principles, natural law, man might not only obtain happiness by surrendering to God's will which could be known through the study of the Scriptures, but by decoding God's other great book, Nature. By adhering to the natural laws found within, man would be able to reclaim his dominion over nature and bring himself and his society into conformity with divine will (Watts, 1958; Dubos, 1961; Jacob, 1982).

Natural law provided an acceptable framework for identifying the universal regularities of life (Olsen, 1971; Shapiro, 1969). The power of reason, variously interpreted by Descartes as mathematical (deductive) and by Bacon as sensualist (inductive) promised to unlock nature's secrets. In so doing, the emerging scientific disciplines (physics and chemistry) enabled progress which was operationally defined as man achieving his "rightful" control over nature and her natural processes (Dubos, 1961) and envisioned as the democratization of social authority and resources so that individuals could exercise their "right" to attain happiness and fulfillment (Risse, 1992).

With the help of science and technological progress, society seemed perfectible. The social constraints which had been legitimized by the structures of the Ptolemaic cosmos and the institutions of a sacred theocentric (Christian) culture liberalized. The domain of the scientific method and explanation which had evolved from observations of

the cosmos (astronomy) and of nature (physics and chemistry) was generalized to the processes of human thought, morality, society, and religion (Olsen, 1971, p.72).

Scientific assumptions and methods from the physical world were generalized to the whole life of man; subsequently the workings of man and society as well as the functions of nature were explained in terms of the mechanisms of natural processes (Turner, 1985; Gay, 1984; Rosenberg, 1976; 1977). Newton's concept of a predictable, lawful universe (a well regulated clock) was further elaborated in the notion of a universal KRAFT (a steam engine) and extended to microcosms of the body politic and the human body. The metaphor of the machine was anthropomorphized; the machine became analogous to perfect order; and the human body became "...not simply analogous to, but essentially identical to a thermodynamic machine..." (Rabinbach, 1990, p.61). The form and function of the human body was no longer conceptualized holistically or discussed teleologically in terms of divine design or purpose but analytically as discrete structures which were appropriate to their functions (Roberts and Thomlinson, 1992). The older vitalistic view that the body was permeated and enlivened by animating spirits gradually gave way to materialistic paradigms of the mechanistic relationships between body structures (anatomy) and their function (physiology).

Concurrently, as the rationalizations for the hierarchical roles and divisions of medieval society dissolved, the organization and practice of medicine changed. Medicine not only reorganized itself around the new science of anatomy and the ambitions and sensibilities of an emerging middle class, but it incorporated the technical skills and tools

of the artisan and the utopian agendas of the Enlightenment philosopher. Physicians envisioned a world free from disease and from premature death and the infirmities of old age (Dubos, 1961; Risse, 1992). By linking the practice of medicine to the concept of natural (universal) law, the role and authority of the physician expanded. These changes established the social and intellectual foundations not only for the development of scientific medicine but for the incorporation of midwifery into the practice of medicine and the evolution of the obstetrician, a new type of medical specialist who would replace the midwife as women's birth attendant.

The New Man-Midwife

Ever since the turn of the thirteenth century, women's medical roles and practices have been progressively restricted and taken over by men (Wyman, 1986). During the seventeenth century, however, the trend escalated with the industrialization of production and the professionalization of the occupations. Once the home and the workshop were separated, women with households and families to maintain were increasingly cut off and isolated from "productive" work. Prosperity, especially among the middle classes, made women's labor less necessary and less respectable; and the professionalization of the occupations and trades worked to exclude women even from occupations such as spinning, weaving, dress making, hairdressing, embroidery, and the practice of midwifery, which had always been the preserve of women and had always provided women a practical means for supporting themselves and their children (Donnison, 1977).

By the end of the sixteenth century the practice of midwifery was gradually being taken over by the surgeons or accouchers in France. During the seventeenth century, the man-midwife, a barber-surgeon or apothecary was emerging in England (Wertz and Wertz, 1989; Petrelli, 1971; Wyman, 1986). In England from 1720 onwards, more and more men were entering the field of medicine through the practice of midwifery. The surgeon's involvement in birth was extended from intervening instrumentally in abnormal labors to attending normal or routine births (Donnelson, 1977). Thereafter, the surgeon or man-midwife was in direct competition with the midwife, especially for the better-paying clientele. These changes can be attributed to:

1. The impact of new anatomical information had on the definition of birth and practitioners changing perceptions of the birthing process.
2. The waning power of the church and ecclesiastical authority.
3. The introduction of midwifery forceps.
4. The development of lying-in hospitals and hospital schools as institutions for training practitioners.
5. The revolution in the scientific view of sexuality which linked sex differences to anatomical differences rather than metaphysical perfection (vital heat).

New Anatomical Information

Anatomy was at the center of the new scientific inquiry. In the sixteenth century, anatomists held prominent positions in the universities. There they systematically applied themselves to the monumental task of correcting the errors of the ancient medical

texts and the misconceptions of the Galenic model. Disputes about the structure and form of the human body were resolved by reference to natural phenomena, and the new results acquired through repeated dissections were communicated in words but more often and more effectively through artists renderings from life (Roberts and Tomlinson, 1992).

Ultimately, anatomical knowledge provided a materialistic alternative to Galen's humoral physiology. And, once the new anatomic-clinical medicine began to replace the old system of classificatory humoral medicine, the patient became a medium through which the text of disease might be revealed while political and educational reforms shifted medical education from the lecture hall to the bedside and from "...an esoteric, bookish, corpus of knowledge... to the temple of nature..." (Foucault, 1963, p.70). It was within this new system of the science of anatomy and the practice of clinical medicine that relatively independent practitioners would eventually unify and that the practice of the man-midwife would evolve into the practice of obstetrics - the first modern medical specialty (Wertz and Wertz, 1989).

By the seventeenth century, anatomists no longer thought of the uterus as an inadequate penis, or in fact, even comparable to a part of the male anatomy. Rather, the uterus had become "...a perfect instrument for carrying out the foremost task of women: providing their husbands with strong healthy children." (Schiebinger, 1989, p.190).

Birth, like other natural processes and bodily concerns became a legitimate subject for scientific study and medical practice. New anatomical knowledge made birth less awesome and less mysterious. Rational models and explanations freed practitioners from

the fear of involving themselves in the mysterious realms of the occult or the sacred. Capitalizing on Descartes increasingly important distinction between the mind/soul and the animal body, the French began to redefine birth as a natural process and perceive it as a machine-like process (Wertz and Wertz, 1989). The organs of birth were seen as being like a pump which was more or less adequate to perform the function of expelling the fetus.

Once obstetrical knowledge became more rational, the surgeons became more interested in the art of delivery. The development of lying-in hospitals and hospital schools, notably at the Hotel Dieu of Paris, surgeons working alongside midwives had the opportunity to observe and attend enough normal as well as abnormal births that they acquired considerable knowledge of the process of birth and of common pathologies such as placenta previa (Petrilli, 1971; Wyman, 1986). With experience, the accoucheurs rediscovered the ancient technique of podalic version from the midwives; and with their knowledge of the organs of birth they proceeded to develop devices and skills which would ease an infant through a partially obstructed birth canal, measure the size of the birth passage, and identify the symptoms of impending difficulty (Wertz and Wertz, 1989; Rich, 1986).

Midwifery Forceps - The Iron Hands

When the new midwifery emerged in England, university educated physicians, the gentlemen who comprised the College of Physicians, would treat the disorders which

arose before and after labor, but they did not attend or treat complications which arose during labor. Physicians viewed intrapartum care as menial (manual) labor; therefore delivering a baby was an unsuitable endeavor to be left to the midwives and treatment of untoward complications of birth were the business of the surgeons (Loudon, 1986). Most English surgeons in the eighteenth century were still barbers, empirics whose primary interest in birth was grounded in the practical realities and economic benefits of aiding delivery. They were craftsmen with little or no formal education in either the liberal arts or in the new science of anatomy. Their relative lack of status, however, made it acceptable for them to concern themselves with the manipulation of tools and come into contact with the pollution of birth. The midwives who summoned these men to a birth, routinely did so in accord with ancient practice and only when surgery (the use of instruments) seemed to be the only feasible way to complete a delivery (Wertz and Wertz, 1989, p.34).

More and more barber-surgeons were already performing as man-midwives by the end of the seventeenth century. With the power of the church waning, the system of episcopal licensing was less effective; licenses were still being granted but prosecutions of unlicensed practitioners appeared to have ceased (Zielanka, 1974; Donnison, 1977; Loudon, 1986). As a result, the opportunities for unlicensed practitioners increased markedly. For a young surgeon or apothecary, the practice of man-midwifery often opened the door to medical practice proper. Initially admitted as women's birth attendant, the doctor could become the source of medical care for the whole family. Man-

midwifery was an additional source of income as well as an excellent way to acquire and to keep a regular medical practice (Loudon, 1986, p.7). The entrance of the surgeon into the practice of midwifery was to change the ancient art in yet another way. Midwives had always attended all women, rich and poor. The surgeons, who were able to charge significantly higher fees than midwives, were not interested in attending to a poor, non-paying clientele, this group was left to the midwives (Schiebinger, 1989).

It was, however, the introduction of midwifery forceps about 1720, that gave the man-midwife a decided advantage over his female counterpart. Forceps largely replaced the hook, perforator, and crotchet, instruments of fetal destruction. In at least some cases, the midwifery-forceps enabled the delivery of a live infant. For the mother, forceps could also be used to shorten an otherwise prolonged and exhausting, possible life threatening labor (Donegan, 1978; Rich, 1986; Loudon, 1986).

Thereafter, the competition between midwives and man-midwives escalated. Initially the two practices diverged around the ancient custom which had defined the surgeon by the use of instruments. By-in-large, male practitioners remained adamant that midwives should not use instruments (Donnison, 1977; Wertz and Wertz, 1989). To strengthen their position, many barber-surgeons refused to give women full instruction, not only in the use of instruments but to share new knowledge and techniques even when there was no surgeon or apothecary available (Schiebinger, 1989). Some man-midwives began to insist that midwives should call them for any difficulty, thereby reducing midwives to "mere nurses" (Donnison, 1977, p.24). Others, apparently to enhance their

own importance and practice, would exaggerate the dangers of childbirth and frighten women into believing that male attendants and extraordinary measures were more often necessary than was actually the case. Subsequently, the knowledge and skill of the midwife was publicly denigrated, and she became a convenient scapegoat, shouldering the blame for anything that went wrong. Soon the man-midwife appeared more competent and more skilled than the midwife.

Midwives, particularly in England, did not go quietly, and in many instances made a valiant attempt to defend the integrity of their craft and to protect their economic position. Citing every authority from the Bible to the new ethnology, they argued that it was women's natural propriety to assist other women in birthing and that the fashionable preference for the man-midwife was a fatal inversion of the natural order (Schiebinger, 1989, p.109). The modesty of women was in danger of being lost for the lack of good women-midwives. Experienced midwives published pamphlets and texts to enable women even "...of the lowest capacity' to deliver their patients successfully without 'in every little difficulty' calling a man." (Stone, 1737, in Donnison, 1977, p.23). Midwives, themselves were beginning to seek both relevant anatomical knowledge by reading anatomy or viewing dissections. In addition, experienced midwives were proposing that it was necessary for an intelligent woman to serve a three to seven year apprenticeship "...to be instructed in an Art where Life depends'." (Ibid). Knowledge or formal training in the art of midwifery, however, was not easy to obtain without going abroad which was out of the question for most women. Lying-in hospitals and hospital schools like those

that were transforming midwifery in France were yet to be established in England. The anatomical knowledge of surgeons and the instruments of the barber-surgeon were coming together; but women were caught in a double-bind -- "...they were ignorant of new methods and practices because they could not attend university or establish their own medical colleges, but they could not do so simply because they were women." (Schiebinger, 1989, p.108). In the end, however, the forceps were just another tool; and while a factor, it would be the systematic eradication of the dualistic gender roles that would render the midwife obsolete.

The Practice of Midwifery and the New Theory of Complementarity

"All arts have been invented by men, not women."

Voltaire, 1764

Despite the fact that other parts of the ancient worldview were being overthrown, the ancient views of the genders persisted and gender distinctions came to be drawn more sharply than before (Achtenberg, 1990; Keller, 1985; Schiebinger, 1989). No longer satisfied with the outmoded theory of the humors, anatomists initially began to abandon talk of cold and moist brains or of melancholic humors though they continued for a time to fall back to the view of women as colder and moister than men to explain the differences between the sexes. By the early eighteenth century anatomists no longer thought that sexuality resided only in the sexual organs; and they began to articulate a new version of the origins and character of observable sexual differences. What emerged

was a new model of biological divergence. Sexual difference was seen as permeating the entire body. This materialistic approach to the sexuality of the body represented male and female bodies as having distinct purposes (Schiebinger, 1989). Thereafter, the male body was suited perfectly for tasks which required physical and intellectual strengths, while the female body was viewed as being suited for motherhood and domesticity.

A new kind of wedge was being driven between the spheres of men and women. As the scientists complementary relationships based on sex replaced the alchemists dualistic principles based on cosmic relationships, gender roles, gender relationships, and gender attributes collapsed into a single category. Biology became destiny and gender distinctions came to be drawn more sharply than ever before. Science changed the causal structure of the argument but not its components. Physical asymmetries between the sexes explained the differences one observed in men and women's moral character and daily lives. Consequently, women were still inferior but the reasons for their inferiority were explained in terms of incompleteness and physical weakness rather than those of moral weakness and wickedness. The male body, notably the white, European male anatomy, became the physical standard by which civilization might be measured and the focus on women's pelvis and pelvic organs served to naturalize and to universalize women's traditional domestic and maternal roles.

Craniologists were quick to point out that the European female pelvis must necessarily be large in order to accommodate in the birth canal the cranium of the European male. Thus male and female bodies were indeed complementary: the superior female pelvis complemented the superior male skull. And it was the man, after all, who was considered to

hold in his larger cranium the seeds of civilization. The woman was simply designed to oblige him (Schiebinger, 1989, p.209).

The roots of women's inferiority, and therefore a rational, scientific basis for her continued subordination to men, were also found in the comparison of women's, men's, and children's skeletons and bodies (Schiebinger, 1989). Women because of their shorter limbs and rounded abdomens, smaller chests, and smaller heads were viewed as being less developed and more child-like. It was reasoned that because women stopped growing approximately four years earlier than men that women never reach full maturity and therefore, while innately different from men, they were also naturally dependent on men's inherent strength and intellect. The seemingly advanced development and superior build of the male body was cited in political documents to justify the legitimacy of men's social dominance (Schiebinger, 1989, p.216). Moreover, the discovery of actual observable anatomical and physiological differences, reinforced the culture of patriarchy, making male privilege appear to be certain and universal.

Table 2.3
Gender Roles
Complementary Dichotomies

<u>Male</u>	<u>Female</u>
THINKING	FEELING
Intellectual	Emotional
Rational	Intuitive
Objective	Subjective
FACT	VALUE
CULTURE	NATURE
Ideas	Physical needs
SCIENCE	BELIEF
Abstract knowledge	Superstition
Formal Education	Religious
PUBLIC	PRIVATE
State	Home
SOCIAL-ECONOMIC	DOMESTIC
Professions/Occupations	Mother/Nurturer
Doctor - curing	Nurse - caring
SUBJECT	OBJECT
STRONG - Body and Mind	FRAGILE
MATURE	CHILD-LIKE
CITY	COUNTRY
MASCULINE	FEMININE
serious	frivolous
thoughtful	emotional
courageous	timid
stoic	delicate
PROGRESSIVE	TRADITIONAL

Theory of Complementarity

The theological (Christian) and scientific (Aristotle) basis for women's inferior status had been effectively undermined by the new mechanistic philosophy; at least potentially Descartes' radical mind/body distinction, by disassociating febrile flesh from the mind, allowed for the possibility of equality between men's and women's intellects. The idea of man as a machine undermined Aristotle and the ancient notion that women have lesser capacity for reason because they are colder than men; and if, in fact, as Descartes contended, the mind operates independently of the body, then "...traditional allegations of female failings of body no longer imply feminine failings of spirit." (Schiebinger, 1989, p.174). There was, however, a clear sense that equality for women was a threat to the social order: "...what would happen to the happiness of families if women, formed to bear, suckle, and bring up children, and likewise to manage domestic concerns, were to leave their houses, their children, and their servants to take their seats with their husbands in the legislative assembly of the nation, the courts of law, public offices, and even to join the army and encounter the dangers of war?" (Meiners, 1788-1800, in Schiebinger, 1989, p.216). There was a clear sense that equality for women threatened the integrity of the family and comforts of middle class life.

According to the theory of sexual complementarity, men and women were not physical or moral equals but complementary opposites, who were fundamentally different and incomparable. Male and female, man and woman, masculinity and femininity as

complementary opposites became interdependent parts of a physical and moral whole. The private caring woman emerged to balance the public, rational man. Subsequently, women's part in the new democracies of the urban industrial society was that of nurturers and mothers.

The appeal of the theory of sexual complementarity was its claim that physical differences revealed nature's blueprint for social stability and the smooth workings of society (Schiebinger, 1989, p.223). The notion that gender differences were grounded in biology not culture, furthered the Enlightenment project of building a society according to nature's laws. If the differences between the sexes were primarily physical, then their social relationships could also be understood as being grounded in nature rather than social convention. The Complementarians believed that these differences were universal and would or should apply to man everywhere. They proceeded to construct a society in which social order was dependent on the complementary opposition between the genders. Definitions of male and female became polarized in ways that were particularly well suited to the growing division between work and home required by early industrial capitalism and the professionalization of the occupations (Keller, 1985; Donnison, 1977). Therefore, as the new enlightened social order took shape, women were reduced to new forms of dependency, while men were endowed with new sources of expertise and authority.

Application of the theory of complementarity of the sexes was designed to keep women out of competition with men in the public sphere, to separate men and women

into separate spheres of influence and activity, and to legitimize the construction of different rules for governing the complementary relationship between men and women than those which were understood to govern men's competitive relationships (Schiebinger, 1989, p.224-226). By the 1790's the theory of sexual complementarity was widely established in Europe; and the medical community not only adopted but reified the sexual distinctions upon which complementarians had constructed their arguments for sharply differentiated social roles for men and women. The death knoll had effectively been sounded both for the continuation of women's independent practice of midwifery and for women's but particularly the midwives' demands for education in the new sciences and training in the use of new technologies.

The wide acceptance of complementarity, by women as well as men, rather than the introduction of the midwifery forceps, led to the ultimate demise of the midwife and the transformation of the ancient art of midwifery into the modern biomedical science of obstetrics. Since men were now innately endowed with the qualities of objectivity and rationality, the surgeons' and the man-midwives' claims to technical superiority and refusal to give women full instruction in the new science of anatomy was no longer simply self serving medical propaganda or the means for furthering their economic interests and professional aspirations. The basis for doctors' allegations about women's incapacity to deal effectively with difficult births and accusations about women's ignorance and incompetency were no longer based on women's education and training but on the scientific facts which had delineated the nature and extent of women's capabilities.

Hence, once lying-in hospitals and hospital schools were established in England to facilitate better training of midwives, women were not generally encouraged to attend. And when they did, it was more or less acceptable that male practitioners taught midwives less than their male students. By training midwives or nurses to support the practice of the surgeon rather than to practice independently amongst the public, they successfully fostered women's increased social and economic dependence on men (Donnison, 1977, p.39). The social status associated with midwifery declined steadily, and the social climate which made femininity and respectability incompatible with women taking up a trade further discouraged women of the higher classes and with good educational backgrounds from taking up work like midwifery. In the past, the womenfolk of medical practitioners had often practiced as midwives, in England after the eighteenth century this was no longer the case. Not only had the British lying-in hospital not received the wife of a surgeon or apothecary as a pupil since 1807, medical men with any social ambitions would not allow their wives to work.

Those who wanted to see the midwife totally disappear routinely argued that even if women were not prevented from acquiring the requisite anatomical knowledge, they were still unfit by nature for all scientific or mechanical employment. Their learning to use obstetrical instruments with skill or finesse would never be possible. Therefore, it was obviously safer as well as more efficient for the whole of midwifery to be in the hands of men. The rashness, incompetence and ignorance of midwives was an ongoing discourse in the nations' medical journals. The Lancet, England's premier medical journal

regularly reassured its lay and professional readers that the women of England were deficient in the moral and physical organization necessary for performing the duties a practice of midwifery required (Donnison, 1977, p.55-56). And, as the new physician-obstetrician began to emerge from the university schools of medicine, many were more interested in abolishing the office of the midwife, legally excluding her from practice rather than training her or regulating her practice.

Table 2.4**Expressions of Alternative Worldviews**

	<u>Traditional</u>	<u>Modern</u>
WORLDVIEW:	Organic World Organism	Mechanistic World Machine
COSMOLOGY:	Ptolemy's	Copernicus' heliocentric
ORGANIZING PRINCIPLE:	Hierarchy	Equality
TIME:	Circular	Linear
SPACE:	Sacred/Profane	Real/Measurable
CREATION MYTH:	Genesis Paradise	Evolution Utopia
CREATION OF KNOWLEDGE:	Analogy	Experimentation
EDUCATION:	Orality Literacy Liberal Arts Apprenticeships	Scientific education Formal Schooling
RELIGION:	Orthodox Protestantism (faith) (reason) Evangelical Protestantism (heart)	Liberal Protestantism
SCIENCE:	Bacon Newton	
ETHIC: Morality:	Honor and Reputation Loyalty	Gentility and Utility

BASIS FOR SOCIAL HEGEMONY:	European Aristocracy	European Bourgeoisie American Middle
ECONOMY:	Agrarian - Land	Capitalistic - Merchants Manufacturing Trades and Professions
MEDICAL SYSTEM:	Humoral Medicine	Allopathic Medicine Biomedicine Osteopathy
BIRTHING SYSTEM:	Midwifery	Obstetrics
BIRTH ATTENDANT:	Midwife	Physician/ Obstetrician
BIRTH PLACE:	Home	Hospital
POLITICAL AUTHORITY:	Monarchy	Republic Representative Democracy

Mechanism vs. Organism: The American Experience

An Age of Transition

A new view of man and nature had emerged; and by the 1760's new mechanistic models of Newtonian physics and the equalitarian, utilitarian values of the English Enlightenment were beginning to influence the thinking of America's educated. Scientific analysis promised to unlock not only nature's secrets but the secrets of a harmonious society, a contented mind, and a prosperous, happy life. American intellectuals had begun to proclaim society's capacity to determine its own destiny, master the world, and shape the human condition through the use of rational intelligence and programs of social engineering (Marty, 1984; Turner, 1984; Larkin, 1983; Guy, 1969).

Ironically these new ideas about mind and reason which had made the American Revolution and would make America's industrial revolution possible were also undermining the blend of traditional Protestantism and English folk tradition which had united the colonists morally and ethically (Marty, 1984; Wyatt-Brown, 1982; Turner, 1984). Long accepted representations of reality (Ptolemy's cosmos, Galen's humoral physiology) had been divested of literal or empirical truth; the networks of teleological paradigms and allegorical associations which had connected the sacred representations of the macrocosm with the material structures and temporal events of the microcosm were unraveling (Boorstein, 1983; Koestler, 1959; Houghton, 1957). Traditional intellectual (The Bible, Aristotle) and social (Monarchy, Church) authorities were being discredited;

and with them, the moral basis upon which traditional society, community responsibilities, and family obligations and relationships had been predicated.

The nineteenth century was an age of transition - In the words of John Stewart Mills (1831), "...mankind have outgrown old institutions and old doctrines, and have not yet acquired new ones..." (Houghton, 1957, p.1). During the nineteenth century, as the mechanistic worldview was generalized to the whole life of man and the realities of everyday life, common sense was reordered around the percepts of power and control. American culture became increasingly fragmented and conflicted (Merchant, 1989; Lears, 1981; Turner, 1984; Wyatt-Brown, 1982). Existing tensions exacerbated as Americans divided intellectually, religiously, and morally as well as geographically. Groups polarized. Alternative worldview (ORGANISM vs. MECHANISM) supported different social ethos (TRADITIONAL vs. MODERN) and underwrote contrasting social attitudes about the scope of society (COMMUNITY vs. NATION-STATE), the basic unit of society (FAMILY vs. INDIVIDUAL), the nature of social relationships (HIERARCHY vs. EQUALITY) and bonds (SPIRITUAL vs. MECHANICAL).

Initially, the nineteenth century therapeutic battles (botanic-cathartics vs allopathic-heroics) appeared to be primarily conflicts of lifestyle (rural community vs urban industrial), of gender (female midwives vs male physicians) and of class (common empirics vs elite regulars). It was however the generalization of the mechanistic worldview to matters of health and illness which simultaneously underwrote the medicalization of society and the transformation of American medicine (VITALISM vs

FUNCTIONALISM), linking the themes of professionalism, industrialization, and paternalism and joining American's medical debates and larger social discourse about the reconstruction of society in accord with "scientific" knowledge with women's choices of birth attendants (PHYSICIAN vs. MIDWIFE) and of maternity care (home vs. hospital) (Houghton, 1957; Haller and Haller, 1974). Specifically the medicalization of society allowed physicians to reach new sectors of society, as well as elaborate the notion that the miseries of disease and premature death could be eliminated through the use of the physician's scientific knowledge and new technological skills (Leavitt, 1986; Wertz and Wertz, 1989; Risse, 1992). Obstetrics, the medicalization of birth, provided a powerful cultural framework for translating scientific discoveries and technological innovations into rational, scientific explanations for women's natural roles and character and for advancing the notion that the miseries and complications of childbirth could be controlled, removed, or prevented by using the physician's knowledge of the organs of birth and their technological skills and instruments to control the processes of labor and birth (Risse, 1992; Rabinbach, 1991; Haller and Haller, 1994; Wertz and Wertz, 1989).

In time, ordinary women as well as natural philosophers and medical scientists began to change their perceptions of women's inherent nature (FRAGILE and IRRATIONAL vs EVIL) and bodies (UNRELIABLE vs. COMPETENT). Women's social roles and responsibilities were rationalized in terms of Biology rather than Scripture or Tradition; and their reproductive experiences were increasingly defined as Risky Medical Events rather than Natural but Life Events. As a result, women's

participation in giving birth (PASSIVE OBJECT vs. ACTIVE SUBJECT) and their role in the births of other women (MIDWIFE vs. NURSE) changed accordingly. Enchanted with the explanations of science and the promise of technology, women, particularly those of urban America's middle and upper classes began to go to technical experts and rationally organized institutions rather than to womens' networks or female relatives and neighbors to cope with life events such as birth and death. Social birth was replaced by medical birth, and the hospital rather than the home was becoming America's place for doing birth (Leavitt, 1986; Wertz and Wertz, 1989).

Chapter III: In Search of the Ideal Birth Experience

And to the woman He said
"I will make most severe
Your pangs in childbearing;
In pain you shall bear children..."
(Torah; Genesis 3:16)

The recent emphasis on birth as a natural process and experimentation with home birth have evoked a renewed interest in colonial midwifery and in the associated model of social childbirth (Ulrich, 1990; Wertz and Wertz, 1989; Litoff, 1975). A woman giving birth in her own bed, surrounded by female family and neighbors and attended by her mother and/or the motherly persona of the community midwife is again a powerful image. Natural childbirth is for some a desirable alternative especially when it is juxtaposed to the impersonal realities of contemporary medicalized birth. Familiar surroundings, familiar attendants and personalized care offer an appealing alternative to the stark stainless steel sterility of conventional hospital maternity wards, the depersonalized bio-technical care of obstetricians, and the attendance of nurses who are not only strangers but rotate in and out on the basis of hospital schedules rather than women's labors. However, contemporary women's dissatisfactions with hospitals, physicians, and medical procedures is not about recovering a lost paradise. Their

alternative birth experiences are a reaction to and a discourse about the continued legitimacy and efficacy of the ideas/ideology, social structures, and social relationships which underlie not only biomedical obstetrics but the whole modern endeavor of which biomedicine is a part. Therefore, a critical understanding of contemporary dissatisfactions with medicalized birth must begin with an exploration of the web of social ideals, scientific theories, and social relationships that came together at the end of the nineteenth century, and displaced the midwife as women's birth attendant and midwifery as America's way of doing birth.

A Century Ago...

A century ago, middle and upper class women took it upon themselves to change the conditions of birth not only for themselves but for their more ordinary sisters. Enamored by the prospect of having a completely painless childbirth, several of America's most affluent and more influential women (i.e., Mrs. John J. Astor) travelled to Freiburg, Germany where physicians were skilled in the "twilight sleep" method of childbirth. Upon their return, they initiated a campaign for "...American women's liberation from suffering." (Wertz and Wertz, 1989, p.150). Through a variety of tactics which included department store rallies, street corner testimonials, and extensive publications, the twilight birth movement attracted a broad segment of American women.

In the minds of the club women who formed the National Twilight Sleep Association, childbirth without pain was a feminist issue (Leavitt, 1986; Kobin, 19).

For these women's rights advocates, the horrors of physiological childbirth were a universal experience which united all women; and they equated painless childbirth with freedom - a release from the bondage of physical necessity, the "natural" way of doing things, and from the curse of Eve which had always shaped women's lives and births. Mrs. Francis X. Carmody, a New York socialite routinely exhorted women "...to fight for it, for the masses of doctors oppose it." (Leavitt, 1986, p.131) Dr. Eliza Taylor Ransom, an activist Boston homeopath, argued not only that twilight sleep was safe if properly administered but that it would "...create a more perfect motherhood." (Ibid, p.177)

Despite the fact that doctors had had effective means for relieving if not eliminating the pains of birth since the late 1840's, as a group they had been reluctant to use it routinely (Leavitt, 1986; Wertz and Wertz, 1989; Kass, 1995). Women's pain still had moral implications and pain in childbirth symbolized women's self sacrifice, vulnerability, and inferiority (Oshern and Singham, 1981). Labor pains were still viewed as a natural, desirable manifestation of women's life force. Hence, many physicians were reluctant to administer anesthesia. Some were afraid that women would lose control and act in an unseemly manner, others argued that the pain of childbirth was necessary for proper bonding with the infant. The strongest arguments against anesthesia were, in fact, physical rather than moral. Individually and collectively doctors found that anesthesia obscured necessary clinical indicators of the mother's well being and of the progress of her labor. Results with anesthesia were also often inconsistent. Accumulating in the medical literature was a growing body of evidence that anesthesia had negative side

effects, namely increased risk of hemorrhage, prolonged labor due to decreased uterine contractions, and infants with breathing difficulties (Leavitt, 1986; Kass, 1995).

By the beginning of the twentieth century, however, more and more women had come to perceive the pain of physiological childbirth as unnecessary if not a hindrance to a successful childbirth experience. Twilight sleep became a panacea, the obvious solution to every woman's childbirth problems. For some middle and upper class women, twilight sleep released them from traditional feminine roles which rendered them weak and dependent. Others argued that twilight sleep allowed them to lapse into true feminine passivity (Wertz and Wertz, 1989). For these women, it was an opportunity to rediscover the vitalistic powers civilization had denied them, a chance to enjoy birth as "natural" women had experienced it, before women became nervous, self-conscious creatures of civilization. For lower class women, painless childbirth was associated with increased health and vitality for themselves and their children (Leavitt, 1986). Brochures from the Twilight Sleep Association not only reinforced these diverse perceptions, they prophesied that the introduction of the Freiburg method would eliminate the need for forceps, shorten the first stage of labor, reduce the time of convalescence, minimize the risks of hemorrhage, and facilitate mothers' milk production (Wertz and Wertz, 1989).

Medicalization of Birth

Women had always controlled the context of birth; birthing procedures were negotiated within women's networks. And while the midwife was an integral part of

those negotiations, men as well as traditional female midwives were constrained by their decisions (Leavitt, 1982; Ulrich, 1990). By choosing twilight sleep, deciding to sleep through the act of giving birth, women of the twilight birth movement were exercising women's ancient prerogatives. Like their mothers and grandmothers who had invited the physician into their birthing room, these women continued to debate the various types of birthing among themselves and to decide how to unite new obstetrical technologies with traditional practices. But, because most man-midwives or doctors were unwilling to employ anesthesia when women wanted it, debates about birthing methods moved from the private arena of women's birthing rooms to the streets and social arenas of public debate. However, once women's birthing preferences became a political issue as well as an individual's domestic concern, the stage was set not only for women changing the conditions of their own births but for the transformation of America's birthing system.

Women's growing preference for medicated, painless childbirth was a major factor in moving otherwise normal births to the hospital. By in large, women's demands for painless childbirth were met by an emerging class of medical professionals; who, unlike the masses of American doctors, were specialists, whose medical practice depended on acquiring scientific knowledge of the human body rather than the mastery of ancient principles encoded in Galen's humors (Capra, 1982; Starr, 1982). Allopathic physicians' anatomical explanations of childbirth and new technologies provided a welcome alternative to the traditional therapies and to religious perceptions that prohibited man's interference in God's Will (Walker, 1983).

The new class of physician-birth attendants, however, were educated in universities and had developed their diagnostic and clinical skills within the context of the clinic and hospital. From the beginning, obstetricians wanted no part of the cottage industry of home delivery (Wertz and Wertz, 1989, p.144). Therefore, in order for a woman to have the services of a medical specialist or a twilight birth, she had to go to the specialist and to the hospital. In the hospital, obstetrics replaced midwifery as the prevailing system for doing birth; and the physician-obstetrician replaced the midwife as women's birth attendant (Wertz and Wertz, 1989; Leavitt, 1986; Starr, 1982; Scholten, 1977).

By 1915, it was clear that the use of twilight sleep required both additional expertise and specialized care. Scopolamine effectively rendered the parturient woman incoherent and uncoordinated. No longer able to participate willfully or meaningfully in their birth experiences, women required constant supervision and often the physical restraint of the crib-bed to avoid injury. They also needed the physician to deliver their children for them. In order to do this successfully, physicians adopted and evolved numerous interrelated procedures including delivering the woman in the lithotomy position, performing routine episiotomies, extracting the infant with forceps, and separating the infant from the mother until she had recovered from the anesthesia.

Obstetricians argued that complications both with anesthesia and instruments most often arose when they were not administered by medical specialists in hospital settings. In order to raise hospital standards and decrease the persistently high rate of

maternal mortality, the medical community fought for the elimination of traditional (female) midwives and for restrictions on the general practitioner (male-midwives). In their view reforms were urgently needed and recommendations also typically involved proposals for better obstetrical training in America's schools; but, in the words of J.W.

Williams, Professor of Obstetrics, John Hopkins University:

Education of the laity that poorly trained doctors are dangerous, that most of the ills of women result from poor obstetrics, and that poor women in fairly well conducted free hospitals usually receive better care than well-to-do women in their own homes; that the remedy lies in their hands and that competent obstetricians will be forth coming as soon as they are demanded. (Williams, 1912, p.7).

Growing numbers of upper and middle class women tended to agree. The supporters of the Twilight Birth Association truly expected that it would be a matter of course for "modern" women not only to have shorter, less painful labors, but to give birth in the hospital, attended by medical specialists, obstetricians. For women of the upper class, the hospital provided not only the newest things medical science had to offer, but a comfortable, hotel-like atmosphere in which to recover from the strains of childbirth. The institution of social childbirth had been in decline for some time; the reciprocal, cooperative relationships which underwrote the institution of social childbirth in Colonial America were being replaced by transient, functional relationships of urban industrial life (Ulrich, 1990; Wertz and Wertz, 1989). In the cities women were no longer available to others when they needed them. Hence, hospital maternity services were evolving not

only for the better instrumental management of complications of birth but as alternatives to traditional maternity care provided by women's networks.

Women Lose Control of Birth

Once birth was moved to the hospital, women lost control not only of their bodies but of their birthing experiences. The hospital, in the words of historian, Judith Leavitt (1986, p.138), gave physicians "...the freedom to develop their own professional judgement about the medical indications in each case they attended and to decide the appropriate therapy." Women's acceptance of professional authority threw this new group into power. The obstetricians medical ethics dictated that the professional community of physicians rather than women's social community (laymen) should decide what therapeutic methods would be appropriate (Starr, 1982; Leavitt, 1986; Wertz and Wertz, 1989). In the hospital, the parturient woman as well as women's networks were rendered psychologically and socially impotent. Even if she was fully conscious and capable of participating in the birth of her child, the attending physician was the only one empowered to decide the methods of intervention necessary to ensure the well being of the mother and her child.

Once birth was firmly established in the hospital, women's maternity care was influenced more by the way the institution of the hospital and the practice of obstetrics were organized than by the needs of women and their families (Mishler, 1981; Michaelson and Alvin, 1988; Danziger, 1979). In the hospital, completely under the

control of the medical community, birth was transformed from primarily a social event to a medical event. Birth was homogenized. Redefined as a type of sickness requiring hospitalization, ordinary or normal births were no longer clearly differentiated from those in which complications had developed. Like other medical diagnoses and problems, pregnancy and childbirth were made to fit into the biomedical model of specific pathology and the practice of obstetrics was progressively restricted to scientifically trained medical specialists. Birth, thereafter, was primarily a technical problem which was expected to be amenable to mechanical manipulations and technological solutions (Oshern and Singham, 1981; Wertz and Wertz, 1989). And, as physician concerns were focused on objectively observing and skillfully managing womens' gravid uteruses, the hospitals' hotel-like accomodations which women found so desirable at the beginning of the century, gave way to factory-like standards of production and efficiency.

By 1950, 88% of American women were giving birth in the hospital; by 1960, 99% or virtually all babies were born in the hospital (Leavitt, 1986; Hubbard, 1990). Physicians attended upwards of % of those births. It could truly be said that medical birth had evolved from a social ideal to a social fact. Strains, however, were beginning to develop in the alliance which had been forged at the beginning of the century. The social ideology which underwrote both women's acceptance of medical authority and belief in the superiority of scientific-physical explanations of and technological solutions for their reproductive concerns had begun to unravel. Ironically, many of the things women so willingly gave up for the safety and convenience of the hospital were now at the very

center of women's dissatisfaction with physicians' attitudes towards women and physicians' approach to birth.

Women's birth choices were again restricted by doctors and conventional medical policy and procedures. Women's concerns about reproduction and motherhood had begun to parallel women's enhanced awareness of their own strength (Chicago, 1985). And, as they discovered the strength and creative powers of their own bodies, they sought childbirth experiences in which they took an active role and campaigned for what they thought was best for their children and themselves. Unable to effectively negotiate their natural or family centered experiences with either physicians or hospitals, women again made their private concerns about reproduction and motherhood public issues (Chicago, 1985; Michaelson, 1988).

In the 1970's, the natural childbirth movement of the 1950's and 1960's took on a social-political hue' "...women of all classes began to organize, to educate one another, and try to change or avoid the professional and institutional structures that exerted such dominance over birth." (Wertz and Wertz, 1989, p.179). By then, the concept of natural childbirth meant demedicalized childbirth, women were no longer challenging the methods of medical birth but medical control of normal or uncomplicated births.

Again cadres of primarily upper and middle class women through their participation in a variety of diverse, grassroots self help groups initiated the process of informing their medical professionals that routine maternity care and physician's control of their births were no longer acceptable (Ashford, 1984; Leavitt, 1986; Rothman, 1988;

1977; Wertz and Wertz, 1989). Professional women, social scientists, childbirth educators, and midwives appealed to women of like mind to take action "...to regain possession of their bodies and the life they have lost." (Wertz and Wertz, 1989). Arms (1975) encouraged a woman to inform herself "...of the real nature of the childbirth process, what awaits her in the hospital... reclaim her responsibility in birth and educate her mate and doctor as to its real experience." (p. 28). And, Cohen and Estner (1983a) conclude The Silent Knife with the prediction: "The future of childbirth in America does not belong to those who are content with the medial and technocratic practices of today. It belongs instead to those who are willing to speak in defense of the original plan." (p. 382).

Diverse groups of middle class feminists and traditionalists were united, in unlikely often uneasy alliances (Rothman, 1981; Michaelson, 1988; Hubbard, 1990; Romalis, 1981). However, whether motivated by issues of family values or women's rights, taking responsibility for ones' personal habits, the environment, and life-style choices became the way not only to sustain or achieve health, but a popular expression for reclaiming control of one's life and body (Naisbitt, 1982; Cobb, 1987; Butter and Kay, 1990). Like growing numbers of well educated, middle class lay men, women seeking to have alternative birth experiences were no longer convinced that medical progress meant increased dependency on the advice and treatments of physicians (Ulrich, 1976; Gevitz, 1988), or that being healthy and happy was dependent on seeing doctors

and receiving their medical treatments (Knowles, 1962; Rogers and Allen, 1984; Naisbitt, 1982).

Through their individual and collective health behaviors and decisions, laymen, but particularly women, began to demedicalize significant life events. And, by confronting institutions from a position of knowledge and strength, they began to reestablish their right to participate in defining the meaning of and in making the decisions about their significant life experiences. Women's renewed interest in midwifery and in the types of birthing experiences midwives offer gives concrete expression to women's dissatisfaction with medicalized birth and definition to what it means to demedicalize birth. Women's alternative birth experiences give definition to otherwise abstract notions about what women mean, about what women want when they demand natural and/or family centered childbirth experiences and equalitarian relationships with their birth attendants.

What Women Say - Fragments from Conversations about Alternative Births

The initial question was always simple; "How did you decide to go to a midwife, rather than have a physician deliver your child?" Over a period of 3 1/2 years from 1986 to 1990, women and couples talked with me about their alternative birth experiences. Several of these women offered their stories either directly or indirectly through a sister or class mate when they discovered I was interested in women's experiences with midwives and homebirths. Others were referred to me by the midwives who had attended

their births. While each story culminated in a midwife attended birth, each reflected the individual resources, experiences, and circumstances of the particular woman or couple.

Yet, together the stories also had some commonalities, themes, which were remarkable:

1. A midwife and/or a homebirth was not these women's initial approach to arranging maternity care for herself and her child. Each had consulted an obstetrician or had had a physician attended birth before they actively considered a midwife attended birth. Each had gone to a midwife because they were in some way dissatisfied with their obstetrician's care and/or attitude toward them or birth.
2. These women saw pregnancy and childbirth as essentially normal physiological phenomena. They did not deny that "things could go wrong" but they did not believe that they usually did, or that most problems would require "high tech" solutions or surgical management. However, they never negated the importance of medical skill and expertise; in fact, they expected their midwives to have both, but they placed equal if not greater emphasis, on their attendants ability to provide care in the context of a supportive interpersonal relationship.

3. They considered the mother-baby unit as one; they never dichotomized or opposed the interests of one with those of the other. What was best for the mother was best for the baby. In addition, when there was a spouse, the interests of the woman-baby were never opposed to those of the husband or family unit. Cooperation and mutuality also seemed to pervade their domestic and personal relationships.
4. Expectations of cooperation and mutuality carried over into their expectations about their relationships with their birth attendants. They not only wanted birth attendants who respected their preferences and treated them as competent intelligent people but also ones with whom they could form social bonds and could trust enough to share the emotional, spiritual aspects of themselves.
5. Their approach to decision making was more likely to be characterized by asking what was reasonable in their particular situation rather than what is the logical or rational approach to a particular medical problem or symptom.

These women/couple's birth choices were always made within the larger context of their lives and knowledge. As a result their own common sense and the physician's specialized medical knowledge were often in tension. Practitioners medical advice was just that, a recommendation worthy of serious consideration, but not a moral imperative. They expected their practitioners to give them the information they needed to make a decision, not tell them what to do.

To Control or Be Controlled: Negotiating Alternatives

Significantly, it was not the themes of domination and submission, which often pervade the political agendas and polemic rhetoric of extremist groups, but themes of cooperation, competency, and participation that prevailed when Mary and other women or their partners described the alternative birth choices. For these women, the birth of a child was experienced as an important episode in an ongoing process of having -- conceiving, birthing, and raising -- a child, rather than as a singular event. The active participation of the partner was expected, and seen not only as an affirmation of the couple's relationship, but as an expression of their shared investment in and responsibility for the creation of new life, part of a larger commitment to nurture and to socialize that child. In the more individual, concrete realm of having children, alternative birthing

situations do not seem to appeal to feminists or traditionalists, but to those who are predisposed to view birth not so much as a physical process, but as a human process, a psychologically and socially significant life event that is best managed in a context or environment of competency, respect, and love.

Mary's Story

Mary had received a book in the mail about homebirthing in a commune in Tennessee. She had not ordered the book and, in fact, had opened the package before she realized it was not intended for her. None-the-less, the package had arrived at an opportune time; she was pregnant for the first time. Reportedly she had never thought about, or in fact, knew about homebirth before reading the book. Subsequently, she concluded "... this is me and I would love to do it." That was in 1976, it was over ten years later and her fifth pregnancy before she was able to arrange the homebirth experience she began to envision during her first pregnancy.

In the mean time, Mary had had four hospital births. Her first child was delivered by Caesarean section in an army hospital. "... when I had it done, it was just luck or maybe a blessing, that the man who did the Caesarean said that he wanted to give me the type of incision so that if I later wanted to have another baby, I could have a vaginal delivery --- if I could find a doctor who would do it." Therefore, when she got pregnant again two years later her major efforts went into finding a doctor who would do a vaginal delivery after a Caesarean (VBAC).

Her second child was delivered vaginally in an Army hospital in Frankfurt, Germany. And although she was attended by a nurse midwife who helped her push the baby out, she did not recall the experience as either satisfying or pleasant. According to Mary, she was the first VBAC that had been done in this hospital. And, according to Mary, "... it was hospital policy not to have anything to eat or drink while you were in labor, not even ice chips in my case because I was such a special case. Because I had had a Caesarean, they were afraid of something going wrong, that I would have to have an emergency C-section." Reportedly, things did not get better after her nine pound daughter was born; again hospital policy took precedence. "I still had to follow their policy like not having the baby afterwards for so many hours ... they shipped her off to the nursery and I went into recovery where I had to wait... so I had to camp out in the nursery so I could see the baby afterwards."

When she got pregnant the third time, they were in Philadelphia. She found a doctor who would not only support her desire to deliver vaginally but allow her to give birth in the hospital birthing room. When she got to the hospital however, "... they told

me NO!, that it was hospital policy that you had to go to a regular delivery room if you had previously had a C-section. They won out, and I ended up having the baby in the delivery room. I left 8 hours afterward; they thought I was crazy..."

"... when we got to the fourth one, I was really looking for a midwife. By that point, I mean I was thinking maybe it wouldn't be crazy. After all I had been through with the other situations, maybe a midwife might not be so bad. So I looked around and looked and I then decided we couldn't pay a midwife. --I was avoiding making a decision because I didn't want to have the baby in the hospital." Eventually Mary went to see a doctor who she described as 'OK'. "He wasn't going to let me have a birthing room delivery but he was pretty much OK on everything else. He didn't think I was weird because I was nursing my two year old and was pregnant." Two weeks later, however, Mary recalled that her water broke and that she began to bleed. Her son was born 2 1/2 months early, weighed 3 lbs 10 oz. and "... he was born where he needed to be born, in a hospital." Mary's desire to have another kind of birth experience had not diminished. In fact, when she became pregnant again she actively pursued a nurse-midwife attended birth, but found that because she had had a Caesarean birth she was considered high risk, and inappropriate candidate despite the fact that she had since had three normal deliveries.

At that point she began to pursue the possibility of having the baby at home. Finding support from a friend who validated both her appraisal of hospital births and desire to have a home birth, Mary began to look around... "I had a friend who was studying midwifery with a lady named Mercy --- She's wonderful!" Mary went on to describe her first visit with Mercy: "So, she asked a lot of questions, and tried to answer my questions; and she was impressed and took a lot of notes, and it was fine. I must have been there two hours talking about my fears of having a homebirth and this and that. At the end of two hours, she said that it was up to me to decide. "You don't need to decide right now but you do need to have prenatal care. Come back to the clinic and we will be following you anyway."

Early in the pregnancy, Mary had had some bleeding and had started seeing a Dr. Wilson. At the time she started seeing Mercy, she was still going to him and decided to ask him if he would be her backup physician. "I mean I went in and told him this is what I want in my birth. I don't want to have an IV and I know once I walk in the door at Spring Branch (Hospital), this is what they will give me because I am a VBAC and have a premature, I'm high risk... Yet the baby is growing and healthy. I'm fine. I didn't even have an episiotomy with the fourth one... He just said: 'I'll do it.'" Apparently this physician had never backed up a midwife before, but afterwards became a regular backup for Mercy.

In Mary's own words hers was "... not a normal homebirth situation." She was separated from her husband, dependent on her family and church (Mormon) for financial support, and her decision to have a homebirth was unacceptable to her family. In Mary's view she was doing what she thought was best for herself and the baby; her parents however interpreted her decision as selfish and self-centered. According to Mary, the

possibility of uterine rupture was a constant theme "What if you bleed to death and die, we're left to raise these four kids. You're not taking us into consideration, you're just thinking of yourself." Mary agreed that "... it could happen..." but concluded "...it could happen anywhere I had a baby."

As fate would have it, Mary did have a serious post partum hemorrhage. Mary recalls: "I wasn't high risk going into it but it was just the placenta that had problems this time. It came out shredded. It wouldn't come out for a while, it stuck. I mean they waited a length of time after the baby was born. When the placenta didn't just come on out she (Mercy) got really worried. She didn't show that she was worried. She had me pushing, pushing, pushing and eventually I pushed and something went 'poof'. I thought that's it - right? She said, 'No honey that was just a little blood.' I mean it was a clot like it was like a placenta. It didn't really bother me but they threw my parents out of the room and we got to work getting the placenta out. It did come out, but it was shredded. They kept it, and took pictures of it because no one had ever seen anything like it with the baby coming out as healthy. Although Mary's blood loss was significant Mercy was able to stabilize her. She was not transported to the hospital although Mercy or one of her assistants returned for the next several days to check on Mary's vital signs and for indications that she "... was getting some color back." According to Mary, it was because of her midwife's skill and experience that her post partum hemorrhage was not more serious.

In the end, Mary did not regret her decision to have a midwife attended homebirth, although she remains a little concerned about next time. Reportedly Mercy told her afterwards that "...she would never deliver another one of my babies, that I would have to be in the hospital because I was high risk after all." And although Mary could not imagine not having her next child at home, she is beginning to construct another possible scenario for herself: "I mean I know it will work out, but I sure don't want to go to the hospital - ... Well if Mercy comes with me, I might go. She will have to come with me, and she will have to do the catching, and just let the doctor kind of be there. I don't want IV's. I want to be in my own bed with, I hope, my husband. The next time, I'll have a husband who will be there with me, so I'll not be alone."

Jane's Story

"... I had already made up my mind that if I ever had another child, the child would be born in a different manner than my son had, because I had been so isolated during the initial hospitalization and then the birthing process..." Although Jane had first stated that she had decided to have a midwife attended homebirth because she wanted family involvement, it was, however, soon evident that the depersonalization, the fear, and the abandonment that she had experienced ten years previously when her son was born had underwritten her decision to have a homebirth.

Asked about the birth of her daughter, she first talked at length about the birth of her son. When her son was born, it was 1970; and Jane was nineteen. Her mother had never discussed her childbirth experiences with her. And, although she had received regular

prenatal care from an obstetrician, she was not prepared to cope effectively with labor or with the hospital. When she first experienced contractions, Jane went to the hospital. Concluding that she was not really in labor, the physician scolded her, telling her not to come back "... until I was crying or in tears or something like that..."

Even though she was only experiencing "false labor", one of the nurses prepped her. So mortified by the whole procedure, Jane recalled "... I kept myself prepped until I came back; I did not want some big fat old woman coming in and shaving me in the pubic area..." She went on; "I would not want to experience those feelings again... uncomfortable, embarrassed; it was something like being belittled... It was almost like being abused in some way... - an invasion of my privacy that I was not prepared for. They told me that I had to have this - that I had to be shaved." Once Jane actually went into labor, she soon found herself alone, at the end of a long hospital corridor. "... they were playing this piped-in music, and I didn't have any control over the music selection; but I remember starting to sing along with it... that is how they (the nurses at the end of the hall) knew I was having a contraction - my voice level would change and they would come down and check me..."

Things didn't really get better after her son was born. The first time she recalls seeing her son was the afternoon after he was born. However, Jane was still groggy from the anesthesia and when the doctor brought him in she recalls thinking that the dark haired baby he was holding "... looked like an Eskimo or some different nationality from what I am." When the doctor told her that this dark haired baby was hers, she recalls saying "Oh, that's nice" and going back to sleep. She still is not sure that the baby the doctor brought into her room that afternoon was really her son, although she can't imagine whose baby it would have been.

By 1980, when Jane made the decision to get pregnant the second time, her life circumstances were different. She was a nurse herself, she was married. Her husband wanted a child very much, and she wanted to have a child too, but "... because of the kind of delivery I had before, I was reluctant to get pregnant and have another child; I didn't want to have to be in the hospital, scared and isolated." Jane shared that her husband had asked if she was sure that it would be "ok" to have a homebirth, but he went along. "... I said, I'll make it ok, that it would be a safe delivery for me and the baby."

In planning for a homebirth, Jane was not only concerned about avoiding the bad feelings she associated with her first childbirth experience but measures that she thought would ensure the well being of her child and the safety of the birthing. She chose her midwife carefully. Suspicious of the qualifications of the new lay-midwives, Jane chose a nurse midwife. Reportedly she was first drawn to Robin by the advertisement in the Yellow Pages. The lead "Providing a Special Delivery" captured Jane's attention but what 'sold' Jane on Robin was this nurse-midwife's interest in living things, the well presented specific detailed information about homebirthing that she provided, but most important was Robin's willingness to reveal information about herself and her family. According to Jane, Robin's openness assured her that the relationship was "2-way" and that she could trust Robin to be "straight with her". Jane had always found that

individuals who withhold information in one domain were more likely to withhold in other, often more important, realms.

In retrospect, Jane found the most important aspect of having a homebirth was preparing for it. Robin had given her a sheet of preparations. Buying new pillows which were "just the right firmness", buying "brown and wedgewood blue sheets which evoked in her a sense of "earthiness", as well as sterilizing the sheets and other necessary supplies gave her a sense of participation in and control of the birthing experience. The ability to "handle things on her own without her mother's or another woman's help" went a long ways to confirming her own confidence as a woman, as a mother.

For Jane, the homebirth experience appeared to give her a better sense of her own strength and capabilities but for her daughter, she thinks that it gave her a sustainable relationship with her father. By the time this conversation with Jane took place, she was again divorced; but her second husband continues to be actively involved with his daughter, calling her every few days, taking her fishing. She attributes this continued involvement to his having "shared her birth". Jane also thought that the homebirthing experience with their daughter also strengthened the relationship between her second husband and her son. Despite the divorce and the fact that her son was living with her mother in New Jersey, her second husband continues to be in touch with him. She even implied that the relationship between her and her former husband continues "to be friendly" because of their shared birthing experience. The only negative consequence of having had a homebirth that Jane could recall was having received a tear which extended almost to her rectum which she finally had to have repaired. According to Jane, Robin knew how to repair the tear but did not do so at the time of delivery because of legal considerations, while attending a birth was not defined as the practice of medicine, suturing was. As a result, Robin could not suture the tear without leaving herself open to charges of practicing medicine without a license. In retrospect, Jane speculated that she probably should have had the tear repaired at the time; but she had been criticized by many of her co-workers who thought the idea of a homebirth was preposterous if not overtly "crazy". There was in Jane's words; no reason to ruin a virtually 'perfect experience' by having to endure the harangue of some emergency room doctor who did not approve of either midwives or homebirth."

Nancy's Story

Nancy's first pregnancy had ended in a spontaneous abortion; and when she found herself pregnant the second time, she returned to the obstetrician who had cared for her during her first pregnancy. She recalled: "I rather appreciated his matter-of-fact attitude about the miscarriage and subsequent pregnancy." She and her husband had just assumed that their children would be born in a hospital and be delivered by a physician, an obstetrician. "That's the way babies are born." In fact, they had paid the obstetrician's fee in total during the early weeks of her second pregnancy. However, as this pregnancy progressed, Nancy became increasingly concerned about her obstetrician's attitude toward her and toward the management of her birth.

About the same time, Nancy discovered the book, Natural Childbirth the Bradley Way in the back of her sister's car. After reading the book and talking to her sister who was also pregnant, Nancy began to ask her obstetrician to be more specific about just how he intended to manage her labor and delivery. She recalled: "I talked to the obstetrician about the issue of an episiotomy, birthing positions - squatting, and the use of the birthing room." She went on to describe her obstetrician's response; "he told me that I wouldn't be given an episiotomy unless I needed one. But, as an aside, he remarked; 'I've never seen a primip who didn't need one.' He agreed that the squatting position for birth was probably a more efficient position but argued that it was more difficult for him. Birthing rooms were 'nice' but then he insisted that the equipment was unavailable when he needed it and that the facilities were inconvenient and uncomfortable for him." A licensed vocational nurse who was in the process of completing her degree (B.S.N.) in nursing, Nancy was medically sophisticated enough to read between the lines. She quickly concluded; "There was no way I was going to have much, if anything, to say about my own birthing experiences."

The obstetrician's attitude evoked recollections of her own hospital work experiences. Recollections of untreated medical problems and of her own frustrations of having too many patients to care for adequately allowed her to conclude and subsequently convince her husband that hospitals were not necessarily safe places. After reading Mendelsohn's Mal(e) Practice, Nancy and her husband were coming very close to concluding that the hospital was not the safest place to have a baby or that physicians necessarily provided the best maternity care. While both agreed that hospital and physician's care was necessary in the event of a complication and made meticulous back up plans, they viewed childbirth as a natural process which was not inherently dangerous. And, although Nancy was yet to experience the realities of labor, she saw no reason why her body couldn't deliver the baby - they began to consider going to a midwife or a homebirth.

Once they decided to pursue the possibility of a midwife attended homebirth, they found that their insurance would only cover the services of a certified nurse midwife (C.N.M.) They found Rachel, a C.N.M., while looking for Bradley prepared childbirth classes; she was the only C.N.M. regularly doing homebirths in the area at that time. After checking Rachel's references with the Obstetrical department of one of the local medical schools, Nancy and her husband made an appointment to meet Rachel and to discuss the possibility of their having a homebirth. The initial visit lasted over an hour, by the end of that visit it was agreed that Rachel would take Nancy on as a client and attend her upcoming birth.

At the time this conversation with Nancy and her husband, Stan, took place, Nancy was eight months pregnant. They were beginning to anticipate the birth of their child; and generally they were pleased with Rachel. They appreciated the time she spent with them, answering their questions, addressing their concerns. Their wishes and preferences were always given serious consideration; Nancy was sure that every attempt would be made to avoid an episiotomy, that she would be able to breast feed the baby right after

delivery. They were, however, a bit surprised that Rachel monitored Nancy's physical condition more closely than their previous obstetrician had; Nancy wondered if all the laboratory work Rachel wanted to do was really necessary or only to satisfy the conservatism of medical backup.

Nancy and I talked again about six weeks later. Their son was almost two weeks old. When asked if her experience had been what she expected, Nancy reported: "There is no other way to go; I never want to be in a hospital." When asked what about this experience surprised her the most, she identified two things. First, it was a lot harder experience than she had anticipated. Although her mother had cautioned her that she hadn't been working in the fields and that her body was not accustomed to hard labor, she had not anticipated either the force of her body's contractions or how long she would have to labor. Laughing nervously, she commented, "I sure know why women are so agreeable to a C-section." She went on to explain that by the time she had dilated to 6 cm, she didn't think she could take anymore, "... a C-section would be so bad..." From that point on, Rachel helped her take one contraction at a time, but she never thought there would be anything that would make her entertain the idea that a c-section should be a "good-thing."

The second thing that caught her by surprise was her husband's reaction. With Rachel's coaching, Stan delivered their son. According to Nancy, he later told her "...that was the most exciting thing he had ever done in his life." He was very attached to the baby, and at times made Nancy feel inadequate when the baby started crying.

Martin and Elizabeth's Story

It was the 1960's when Martin's oldest son was born. He was 19 years old. As he recalled the experience it was terrible; "I never felt so helpless in my life." He still recalls in vivid detail being separated from his wife; she was in a labor room while he was relegated to the fathers' waiting room. He could hear her cry and scream for what seemed like an incredibly long time. Then, he heard nothing and nobody told him what was happening. Even after his son was born, Martin only got a brief glimpse of him as a nurse whisked him off to the nursery; he could not hold him. And, he could not be with his wife until visiting hours the next day; she was recovering from anathesia.

Martin had grown up in rural Oklahoma. As a child he had seen numerous livestock births. Although he had not really thought about it very much at the time, birth in those situations was never presented as inherently abnormal or unduly risky. He recalled that even when complications occurred, they were manageable. After the birth of his first son, however, he began to think more about birth and what was necessary for it to be safe. As he began to ask questions about what women did for hundreds of years before physicians and hospitals, he discovered that his mother was one of thirteen children - all born at home delivered by his grandfather. Nobody could recall any significant complications. At this point, Martin could not say he was thinking about encouraging his wife to have a homebirth or see a midwife instead of a physician the next time. In retrospect he didn't know if such options were even available; but what he did know was that he never

wanted to be separated from his wife while she was in labor or be told he could not hold his child.

Years passed, Martin and his first wife had divorced; they never had a second child. The issues which arose after the birth of his first son resurfaced some years later. Martin had remarried and Elizabeth, who was about ten years younger, was pregnant for the first time. According to Martin, issues of control began to surface the first time they saw the obstetrician. Martin did not like the doctor's attitude. Although Elizabeth was a nurse who worked in a large children's hospital, Martin took the more active role in interviewing the obstetrician and discussing what they wanted their birth experience to be like. Reportedly, the obstetrician offered them the birthing room - "...if it was available." Elizabeth added; "That was a big if." The hospital where she would have delivered only had two birth rooms and a very busy maternity service. It was then that Martin broached the subject of having a homebirth with Elizabeth and asked a friend at church about midwives.

That was the first time Elizabeth had even considered the possibility of an alternative birth. For her, reading Arm's (1975) Immaculate Deception was the deciding factor. Much of what she had learned in nursing school about what was 'necessary' for safely delivering a baby no longer seemed so necessary or even so safe. Her first birth was attended by Polly, a lay-midwife, who they had found through their friend at church. Both Elizabeth and Martin became very comfortable with Polly and were looking forward to her attending their first birth. Polly, however, was to be out of town a couple of days around Elizabeth's EDC. Polly had arranged for backup, just in case Elizabeth went into labor while she was gone. Beth, Polly's backup, had come out once to check on Elizabeth who was experiencing increasingly frequent Braxton Hix Contractions. Neither Elizabeth nor Martin were particularly comfortable with Beth; they wanted Polly to attend the birth. And, in retrospect, both believe that Elizabeth "waited" for Polly, although Elizabeth was not conscious of doing so at the time. Polly reportedly got off the plane, called them, and came straight to their apartment which was about 45 minutes to an hour away from the airport. By the time Polly arrived Elizabeth was in active labor; their son was born within the hour. After recounting these events, Martin smiled, looked at me and asked: "Do you believe one can control one's body through thought; that two consciousness can communicate?" Obviously Martin did and Elizabeth did not disagree.

When Elizabeth was again pregnant, there was no question that they would have another midwife attended homebirth. Polly, however, was in nurse-midwifery school; and one of the conditions of her being accepted into the program was that she would not attend births independently while she was in the program. Polly referred Martin and Elizabeth to Rachel who had completed the C.N.M. program the year before Polly was admitted. Martin expressed a clear preference for Polly with whom he shared a special non-verbal sense of knowing. Rachel, he thought, had the capacity for this, but was not yet quite comfortable with the notion. Moreover he thought Rachel was too concerned with the possibility of 'pathology'. He would have preferred not to hear so much about possible problems. He was aware of Rachel's watchfulness and sure that if even the hint

of a problem developed, "... she would have them seeing a physician in an instant." Martin had already accepted the fact if there were complications, they would be going to a hospital, where a physician would take over. None-the-less, he went on to describe a generally positive, birth experience with Rachel as he provided the narrative to the video they had taken of their second son's birth.

The day before their second son was born, Elizabeth was experiencing increasingly regular contractions. Rachel had driven out to check on her, according to Elizabeth, both she and Rachel suspected that she was still experiencing Braxton Hix contractions but Rachel wanted to make sure. After Rachel left, Martin reports that he began to ask Elizabeth "... if she had decided to have that baby yet?" The next day Elizabeth went into "real labor" and by the time Rachel arrived Elizabeth's labor was "active", Martin's 18 year old son was beginning to videotape the activities, and their young son was crawling up on the bed when his mother groaned, telling her not to cry, checking on what his father was doing and then going off to play only to come back in a few minutes to see if the baby was here yet. Rachel checked on Elizabeth when she arrived, then went off to another room allowing the family to carry on until birth was imminent. At that point Rachel talked Martin through the birth, telling him how to support the perineum, how to ease the baby's head, and how to overcome the obstacle that the waterbed was creating for him (something no one had anticipated). Martin smiled as he added that it was a good thing she was there because "... as the baby was crowning - my mind went blank."

Interestingly the water bed again presented a problem for the delivery of the placenta. Rachel became a bit concerned that it was taking too long for the placenta to separate. She was beginning to talk about the use of pit (pitocin) to facilitate its expulsion. Polly had arrived by that time and had encouraged Rachel to be patient and to try getting Elizabeth up before utilizing the medication. Once Elizabeth stood up, the placenta slipped right out. It was at that point that all of them realized that the water bed was causing Elizabeth to deliver uphill, having to overcome the forces of gravity. As a result, the placenta just laid in the uterus until Elizabeth stood up.

According to Elizabeth, they are still talking about having another child, a girl would be nice; but she was not ready to say they were planning another birth. If there was to be another child, she would want to have another homebirth; and by then "Polly would have finished school and be a C.N.M." With that comment, Martin smiled and added, "Oh, Rachel wasn't so bad and by then she should have a little more experience and begin to trust that things are usually 'ok' and she will "know" when they are not and that she will "know" what to do."

Sharon's Story

Sharon was a nursing student at one of the local universities and her husband was a graduate student at the school of public health when Sharon became pregnant for the first time. Initially they went to an obstetrician. During the first visit, her husband John had asked him how he felt about procedures that were not really necessary, like ultrasounds. According to Sharon, the doctor assured them he only did an ultrasound or any special

procedure if there were definite indications for it. He then examined Sharon and asked "...are you sure about your dates?" After Sharon stated that she was, the obstetrician recommended that she have an ultrasound. Sharon and John concerned that "...there might be something really wrong..." agreed. There was nothing wrong; the obstetrician's measurement of her fundus height was a little higher than it should have been according to the date of her last menstrual period. The doctor wanted to see if there were twins. Sharon frowned and the irritation in her voice was marked; "But we're students and can't afford \$150 for an ultrasound, plus if it's not necessary, why do it?"

It was her husband, John, who initiated the idea of going to a midwife rather than an obstetrician. He had gotten to know several through mutual courses at the school of public health and was familiar with the midwifery program at the county hospital. As Sharon recalls, initially she did not care "one way or the other." But the more she thought about it, Sharon "...didn't like the idea of being flat on my back in a delivery room or being highly regulated in one way or another." She also began to recall her discussions with midwives during her two years with the Peace Corps in Kenya and "...seeing how natural the birth process was there. There just wasn't anything to be alarmed about... you just stopped what you were doing, went into your room.. and you know 6 hours later, just picked up what you were doing... It just seemed like such a healthy attitude to me." According to Sharon, what finally clinched her decision was her student nurse experience which included working with the staff nurses in the birthing rooms with the midwives as well as in the a labor and deliver rooms with the obstetricians and their residents. She went on to explain:

"...I know that that is the extreme case there, the labor and delivery room at J.D. but, it was very dehumanizing, I was really very upset by the whole thing... But, it showed me it was ridiculous for a woman not to have more to say in the birth. You know, I really don't want to have someone telling me what to do every step of the way when there are things I don't agree with; and I don't want to have any medications... they're not necessary..."

Once Sharon decided that she would prefer a midwife, she approached a classmate, who knew the nurse-midwives who had worked at the county hospital and was generally familiar with the local practice of midwifery. Dora gave her the names of two midwives and the name of an obstetrician who did midwifery-like deliveries. Sharon and John spoke with each and decided on Catherine, one of the two nurse-midwives, because they "...felt more at ease with Catherine than any of them after the first interview" ... and because Catherine was "... really good friends with my husband's friends at school; so he felt more inclined to want to go with her."

When Sharon was asked what it was that made her so comfortable with Catherine, she initially mentioned that she didn't talk to them across a desk. "... she took us right over to the birthing room and showed us around." Sharon perceived her to be "... more like a friend rather than somebody you are hiring to do a specific service for you... there

was just more warmth." She also appreciated her directness, her willingness to answer questions without giving responses which sounded more political or philosophical than honest. For example:

"...with Catherine you just don't get that feeling. She always says about any test 'these are the pros, these are the cons and you decide whether you want to do it or not...' 'if the results come out that there might be a problem, what are you going to do about it? If you are not going to do anything about it, then don't do the test.' It was nice to have somebody just come out and say that -"

Catherine does not do homebirths, but according to Sharon she never considered having a homebirth. Although she considered birth "a natural process that you don't have to panic over," she knew after her obstetrical nursing experience "all the things that could go wrong." Her insurance would not cover a home delivery and she did not feel that they could afford the luxury of having too many services that their insurance did not cover, but she didn't think she was ready for a homebirth. For Sharon, the choice of a midwife in the hospital was a compromise between the over technicalization of the obstetrical birth and homebirth.

Sharon and I talked again about four months after her son was born. Three issues dominated the conversation; first a rather detailed description of her birth experience; second the revelation that she really missed being pregnant, and finally a review of the experience of her newborn son's hospitalization for treatment of jaundice. According to Sharon she missed being pregnant. Laughing a bit as she commented on the strangeness of such a notion, Sharon went on to explain: "I don't miss being big, or being bloated - I really blew up at the end. But I miss the secrets - the feeling of having the baby inside you. He's a special person who hasn't been born yet - maybe it's a boy, maybe it's a girl - I really miss that - you feel so powerful when you're pregnant - But it couldn't go on..."

Sharon described a rather different birth experience. Reportedly she was in labor for just over 24 hours and in hard labor, often back labor, for about 12 to 13 hours. The birth itself was reportedly complicated by the fact that the baby presented OP (occiput posterior) rather than OA (occiput anterior) and that there was some shoulder dystocia which made it necessary for her to push longer and harder. According to Sharon, "the midwife (Catherine) had to really get down there and pull him out -"

What surprised Sharon the most about her childbirth experience was her reaction to it, specifically she did not want people around her:

"Stan was there the whole time and I didn't want anybody near me - I think it was a little disconcerting for him because he wanted to be supportive and nurturing, and I was pushing people away. That was difficult for him ... I never imagined myself to be like that - I enjoy people being close to me - close friendships; I'm a fairly affectionate person. But ... (laugh) I

was really so claustrophobic that I really couldn't tolerate anybody standing next to me or even touching me - I just couldn't stand it at all."

After describing how self involved and unaware she was of her surroundings, Sharon concluded her description; "I was just completely surprised by the whole thing and how they tell you, you have no control over your body, but how odd that sensation really is when it happens - It's just alarming almost." For Sharon losing control, or more accurately having to relinquish control was the most difficult aspect of her childbirth experience:

"I feel like we had a really positive birth experience - the negative thing for me initially was feeling like I had lost control of myself - I mean I knew it happened to other people (laugh) - But I felt funny about the noises that I made - and being kind of fussy and pushing people away. You know, now that I look back on it - My Gosh, that's what I needed to get through it, and that's OK."

Sharon had few second thoughts about her birth experience, she appreciated the care she had received from both her midwife, Catherine, and her friend who had helped her arrange a midwife attended birth. She would do it all over again with the same people. She was, however, still having "...bad feelings about what came after he was born." Her son's bilirubin level became dangerously high, and two days after leaving the hospital when he was three days old, he had to be readmitted for diagnosis and treatment. By the time Sharon was recounting the events, her son was fine but she was still struggling with her failure to identify that he was "too yellow" for it just to be the normal physiological jaundice that occurs in newborns; and with the guilt of having gone home 24 hours after the birth. Her pediatrician had advised her to stay until her breast milk came in and he was breast feeding "...to her satisfaction." But she wanted to go home; her friend was a breast feeding consultant and had offered her assistance. The pediatrician agreed although apparently with some reluctance to the discharge. When the baby had to be readmitted, Sharon stated; "I felt guilty - I felt like I should have noticed that - he was home two days before he had to go back again - and I wanted to get out of the hospital early - The pediatrician had wanted us to stay...." When asked if she felt responsible for what happened, Sharon responded; "I think that the pediatrician kinda insinuated that and secondly he wasn't breast feeding very well at first - but he was only 3 days old...." After suggesting that she found the pediatrician's expectations unreasonable, Sharon continued: "... it's just that her whole demeanor just made me feel like it was my fault - that his bilirubin got so high so fast...." Next time, Sharon will be as careful about choosing her pediatrician as she was in choosing her midwife:

"You run into the same thing with the pediatrician that you do with the fear of choosing the wrong obstetrician - the fear of somebody telling you

what you have to do - you know why are these people telling me what I have to do with my baby - it's not like I haven't read up, I haven't studied - I haven't taken pediatrics in nursing school - like I have no idea what I'm doing and he's not suffering now (laugh) I don't know these doctors are controlling - avoid them is my theory...."

Rick and Zoe's Story

Zoe was nine months pregnant with her second child; and noticeably uncomfortable. She was also making last minute preparations for a midwife attended homebirth. According to Zoe, the idea of going to a midwife and having a homebirth was Rick's idea. "Rick is the one who is always finding out about new things - I hear things through him." She went on to describe her initial response, "At first I wasn't sure because I didn't know anything about it (midwifery) and it was - well, it's funny to think of having children at home now - You know, if you're going to have a baby you go to the hospital but... I guess I'm not into challenges; I'm not the one to start something new..."

Their first child was born in the hospital, delivered by an obstetrician. That experience had not been "the best" for either Zoe or Rick; and even if they had been in the same area, Zoe doubts she would have gone back to the same obstetrician:

"... there was one time I saw him at a store - we were in a smaller town, so most people see each other a lot - I saw him again and I went up to him and said 'hello'. It was almost like he didn't even know me.... So, I guess he didn't want to see me again anyway - He probably had too many pressures from everybody even Russell and my mother; there was a lot of commotion going on during this whole thing."

As Zoe recalled the events around the birth of her three year old daughter, there seemed to be a note of sadness in her voice. Confusion about her due date (EDC) seems to have set the stage for the "commotion", conflict between she and her obstetrician about the necessity for a C-section, conflict between her mother and the obstetrician, and between Rick and her mother. The underlying issue appears to have been control.

According to Zoe, she knew she and Rick conceived in August but did not know when in the month. Her obstetrician had estimated one due date, his backup had estimated another 2 1/2 weeks later. When Zoe went 2 weeks past the original EDC, the obstetrician reportedly began to get "paranoid" and "...started doing things to induce labor." Finally he gave her consent papers to sign for a C-section. At that point Zoe refused:

"I didn't go through with it - I didn't even start with it, I didn't want to start something like that and end up having a baby like that - Because, I've always heard - My aunt, she's a LVN and she told me that C-sections are much more uncomfortable and if at all possible you need to go the natural way. She told me just to hold on and go with your own feeling."

At the point Zoe would not agree to a C-section the tensions began to build. As she recalls it, the expression on the obstetrician's face was one of fear - "... when I didn't do anything about that you could tell it in his face how scared he was getting..." Rick was pressuring her to listen to the obstetrician because he knew more. Her mother, she thinks "...wanted me to listen to myself and know - that everything was OK and not listen to the doctor or Rick." Rick and her mother were arguing, her mother was calling the doctor names, behind his back but to his face. Zoe's response was one of confusion and distress "... it was a confusing thing for me - I didn't know what was 'right' - only I knew that everything was alright... I thought everything was going to be fine; the baby was going to come - " Rick, however, nearly panicked, "... there was even one time he told me he 'didn't know what he was going to do; he couldn't handle it anymore'...."

Rick and Zoe's daughter was born about 5 weeks after the obstetrician's original due date. According to Zoe she was in labor about eleven hours, the obstetrician broke her bag of waters but does not believe there were any other interventions. She had her baby "the natural way" and both she and her daughter were "just fine".

Although Zoe was not initially very excited about the prospect of either going to a midwife or having a homebirth, she was interested in avoiding the conflicts which surrounded the birth of her daughter. So after Rick had initiated the process of finding a midwife by calling and talking with three different midwives, she agreed to talk with Kandi, the midwife Rick had found most impressive. After talking with her and checking the references Kandi gave her, Zoe found the idea of a homebirth more appealing "...because having a baby at home sounded so much more personal and intimate." Moreover, going to a midwife rather than an obstetrician began to appeal to Zoe "...because I like females, they seem to sense better than males, and I thought that it would be much more enjoyable having a female deliver the baby..." Karen's references recommended her highly, at that point Zoe decided to go see her. "I still had doubts but I went ahead with it because I figured it couldn't be any worse than seeing a doctor like the doctor we had before who always seemed so paranoid."

After their first visit with Karen, Zoe was impressed. She found Karen very attentive, more sensitive to her and her needs, and more "laid back." Specifically, Zoe stated she was not intimidated by Karen and was able to ask her personal questions:

"I get uncomfortable with a doctor - so I can't really do that - ... talk about infections or things that happen or the way you have your baby or if you're uncomfortable. Now like she said you have any burning or whatever else - I can't - it's hard to say to a doc or to a man what's bothering me - And, she understands what you're saying - you don't have to go into details."

Although neither Zoe in this conversation or Rick in a subsequent conversation identified the fact that they did not have medical insurance as a factor in their choosing a midwife, the reality was that their most obvious alternative was the obstetrical services at the county hospital. Rick was a nursing student at a local junior college and worked as a

psych-tech at a private adolescent psychiatric hospital. At the time of the interview, Zoe had just taken a medical leave. She had been working as the art teacher at the school associated with the psychiatric hospital. Money was tight and most private obstetricians charged more than twice Karen's fee; hospital charges would be an additional expense. In fact, their backup plan was to utilize the county hospital if there were unexpected complications during the homebirth.

Another factor which influenced their choice of Karen as their midwife was that at the time they were deciding on a midwife they did not know the difference between lay-midwives and nurse-midwives. Although Kandi told them she was not a nurse, Zoe stated that she had thought she was; "I didn't know the difference." Nor were they aware that there were nurse-midwife services both at the county hospital and at one of the area teaching hospital's affiliated with a medical school. Subsequently, Rick told me that he had randomly chosen three midwives listed in the Yellow Pages then talked with each for at least 20 or 30 minutes. He was impressed with Karen because her answers to his questions which included: "Have you ever lost a mother or baby?" were the most direct. He interpreted this directness as both honesty and competence; and he was particularly impressed that she was open about having lost one baby and the circumstances surrounding that baby's death. He was also impressed that she had worked as a midwife for over ten years and had delivered over 500 babies - "she seemed to know what she was doing."

According to both Zoe and Rick their homebirth experience was medically uneventful, but an experience they would "cherish forever". Rick beamed when he showed off his son and when he talked about having helped, catching the baby and cutting the cord. For him the whole experience was a miracle, a confirmation of many of his newfound religious (Mennonite) teachings. For Zoe it was the only way to have a baby. She could not imagine what it would take for her to return to either an obstetrician or a hospital. Both were more than satisfied with their choice of midwife; and if there was ever another baby, they had no doubts that they would want Karen to be their midwife.

The Reality of Contemporary Obstetrics

Chance Observations

Throughout the United States, midwife attended births, either in the hospital or in the home, were the exception. As this study was concluding in the early 1990's, almost all

infants were still born in the hospital; 98.8% in 1989 and 99.0% in 1993 (Declerq, 1989; CDC Monthly Vital Statistics Report, 1995). And, while the numbers of midwife attended births had increased from 60,000 in 1979 to 150,000 in 1989, the overall percentage of midwife attended births remained small, 3.99% in 1989, 4.4% in 1992, and still only 4.8% by 1993 (Parker, 1994; CDC Monthly Vital Statistics Report, 1995). During the same period, the percentage of homebirths plateaued between 0.6 and 0.7%. Even in Texas, where one third of all midwife attended out-of-hospital births in the United States occur, almost all the recent growth is in midwife attended hospital births and free-standing birth center births (Declerq, 1992; 1993).

Like the demographics of home birth, the demographics of midwife attended hospital births were also beginning to shift. By the mid 1980's, nurse-midwives practicing in the Houston area were still most often attending women who were young (<20 yrs), unmarried, poor, and from an ethnic or racial minority; but they were beginning to attend increasing numbers of married, well educated, middleclass women in hospital birthing rooms or in free standing birthing centers (SoRelle, 1984e, p.4). Other women dissatisfied with previous birth experiences had hired a monitrice or professional labor attendant to deal with many of the same complaints about obstetricians and hospitals (Perez, 1989). Therefore, several questions arise. Were the experiences with birth and obstetricians described in the stories of Mary, Sharon, Martin and Elizabeth or Rick and Zoe somehow unusual? Were their perceptions of their needs and of the maternity care they received hopelessly distorted? Or, were their behaviors indicative of a radical and

needless over reaction to their particular situations? Although there was no way to answer those questions directly, brief observations of two private hospital's labor and delivery suites suggested that these informants descriptions were firmly grounded in the empirical realities of biomedical maternity care, and that the experiences and perceptions which had informed and rationalized their decisions to have an alternative birth were probably neither unique nor substantially distorted.

More specifically, the conditions in hospital A as observed in the late 1970's seemed to lend credibility to Nancy's hospital induced fears and loneliness as well as to Martin's isolation and helplessness. The conditions in hospital B observed in the mid 1980's appeared to support Mary's and Nancy's but also Sharon's perceptions that their attempts to make their birth experiences more natural and socially and psychologically satisfying would be thwarted. Physicians, as Sharon discovered, were obsessed with the risks of abnormalities and, as Mary observed, were not inclined to relinquish their control of the birthing processes or to negotiate their decision making prerogatives. Mary's multiple experiences with various hospitals and doctors clearly exemplifies the dilemma of these women/couples - There was always a policy, a rationale, or a risk which made her wishes and preferences "unsafe", "unfeasible", or "inappropriate". Simply changing hospitals and/or doctors was unlikely to ensure the type of participation and type of care that these women and couples had envisioned.

Hospital A

Hospital A was one of several large metropolitan hospitals located in North Central Texas where women with private insurance routinely received their maternity care. It was late in the Fall of 1978; and I was visiting with a friend who taught obstetrical nursing at the nearby university. Before we could begin the activities we had planned; Marilyn had a meeting with the maternity unit's head nurse. During this meeting, I had intended to read; but situated in the coffee room in full view of the nurses station, the conversations and activities there attracted my attention and led to the following description of that thirty minute wait.

There was little discussion of any patient although it was evident from the labor board that there were five women in various stages of labor as well as two women who were in danger of delivering prematurely, one at 28 weeks, the other at 31 weeks. However, there was no paucity of activity or discussion. Some of the more memorable activities and interactions included, one of the labor nurses searching the drawers and cabinet in the nursing station for shaving cream for a barefoot, scruffy-looking physician who was complaining about one of the women down the hall. Just then, there came from the direction he had been pointing, a sudden, shrill, rather desperate sounding cry. This outcry prompted the other nurse who was plowing through the stack of charts in front of her to complain "... there is nothing wrong with her, she's just a cry baby." Not two minutes later, a student nurse appeared from the general direction of the cries. This

student had just dumped a 1000 - 1500cc soap suds enema into the bed of her labor patient.

Although it is not clear to me if these incidents involved one or two or even three patients, what was clear was that none of the professional staff seemed particularly concerned. During the short time I was able to observe the activities, the staff nurses did not go down the hall into any of the labor rooms. Marilyn, however, stated that the usual routine was for one of the nurses to check on laboring women every fifteen or thirty minutes and more often if a woman's labor was nearing transition (>8cm dilation). As a rule though, the staff generally only went into the labor room if there was something specific to do, rarely did one of the nurses just sit with a laboring woman. In fact, according to Marilyn, women were often left to labor alone. A husband could only stay with his wife if the attending physician wrote an order that specifically stated he could do so. Otherwise, husbands had to wait in the 'Dad's Room' which was located just to the left of the double doors separating the labor and delivery suites from the general hospital. Interestingly, the first thing a prospective father would see if he walked out of the 'Dad's Room' and looked towards the labor rooms was the large, boldly printed sign on the double doors; this sign blared - "NO ADMITTANCE AUTHORIZED PERSONNEL ONLY".

As Marilyn and I walked out of the front door of the hospital, I asked if it was always like this? Marilyn smiled and answered: "That's what I was talking to the head nurse about... Is it really that obvious?"

Hospital B

Some seven or eight years later, I again had the opportunity to observe the milieu and activities of another labor and delivery suite. By this time, labor rooms had been transformed. They were no longer sparsely furnished impoverished versions of the typical hospital room or ward, they looked like miniature Intensive Care Units (ICU's). Each woman was confined to a small private cubicle. Above the head of the bed was a fetal monitor and outlets for oxygen and gastric suction were on the wall. Each woman was not only attached either externally or internally to the fetal monitor but had an IV in one arm and a blood pressure cuff on the other. Essentially immobilized, these women were not only confined to a hospital bed, but could only turn from side to side with great effort. And although mothers, husbands, and significant others were evident, professional, nurses and residents appeared only to enter the labor rooms when there was a specific task to perform. While family members and an occasional student nurse could be observed sitting with a laboring woman, rubbing her back, or wiping her forehead, the nurses were more often checking the monitor rather than talking with the woman; and when they touched her it was typically to take a blood pressure, listen to fetal heart tones with a dopler, administer medications or perform an internal exam to assess the progression of labor.

According to one of the university nursing instructors who routinely supervised students, the medical residents are responsible for managing most of the labors and

delivering the babies. Their routine obstetrical management typically involves administration of intravenous fluids, use of pitocin and the rupture of the amniotic sac to stimulate labor, use of epidurals and demerol to manage the pain of labor, and continuous electronic monitoring of the effects of labor on the infant. The nurses who worked in labor and delivery, referred to themselves as ICU nurses and insisted on wearing the blue scrubs which were worn by the ICU nurses rather than the green scrubs the hospital made available to the nurses who worked on the maternity floors. In fact, the prevailing atmosphere was one of impending crisis. The medical drama of life and death overshadowed the miracle of birth; and concern about physiological parameters left little time for the professional staff to attend to either the mother's psychological comfort or their interpersonal relationships with the expectant patients. Blips on the monitors received more attention than women's concerns, and cries of pain were routinely answered with medication and anesthesia rather than comfort or interpersonal support. Parturient women were treated as if they or their infant were gravely ill rather than healthy and approaching birth.

New Procedures - Old Ideas

Reaffirming the Axioms of Obstetrical Medicine

When each of these informants told their stories, the conflicts between themselves and the biomedical establishment were related in terms of their specific problems with individual physicians and particular hospitals. There were, however, clues that their

differences were not so circumscribed nor were their frustrations so focused. Rather than attempting to find another obstetrician who would honor their requests and facilitate their preferences or another hospital which had more birthing rooms available and more liberal medical policies, they pursued alternatives to a conventional medical birth.

The question, "Why didn't you just go to another physician?" was never asked. It did not seem necessary at the time; the answer seemed self evident. Consequently, the response, "It wouldn't have done any good" remains unspoken and implicit in attitudes and behaviors. Individually and collectively, they somehow knew that the family experience and supportive care they sought for themselves and their child was unlikely to happen in a system which perceives pregnancy as a kind of disease which needs to be cured, women's bodies as inadequate, unreliable, and in need of control, and childbirth as a type of impending medical emergency which requires an immediate and maximum response.

In fact, just as women were demanding an active role in and control of their births, technological surveillance of women's bodies and pregnancies became routine; and the numbers and reasons for instrumental and operative procedures escalated (Cohen and Estner, 1983; Wertz and Wertz, 1989; Brody and Thompson, 1981). Some questioned whether modern obstetricians had the clinical judgement to differentiate normal from abnormal or possessed the clinical skills to manage anything but the most routine vaginal delivery (McBride, 1982). However, most obstetricians' only experience with birth has been biomedical birth; and the use of additional instrumentation and manipulation to ease

women's pain or to prevent unfortunate outcomes was more consistent with the standards of good obstetrical practice and with modern expectations about medical progress. Unchecked by alternative experiences with birth or ideas about health, the paternalistic attitudes and instrumental decisions of obstetricians not only reflected the realities inherent in medicalized birth but have served to create many of the conditions which justify them. Therefore, the role of physicians expectations that women are inherently emotional, charming, dependent, submissive, and delicate and that birth is precarious and pathological, emerge as significant obstacles to women's attempts to humanize their birthing environments or to naturalize their birthing experiences (Richards et al., 1987; Cohen and Estner, 1983; Wertz and Wertz, 1989).

Caring for the Second Patient - Treating Infant Mortality

Since 1950, maternal mortality declined from 50 per 100,000 live births to 10 per 100,000 live births in 1980 (Sachs, et al., 1988). For all white women, the maternal mortality rate had dropped to 6.7 per 100,000 live births; and the risk of maternal mortality was even lower for women who were married, had received "adequate" prenatal care, and obtained at least twelve years (high school) of education (Koonin, et al., 1991, p.4). The traditional causes of maternal mortality, hemorrhage, infection, hypertension, induced or exacerbated by toxemia, and cardiac disease, typically a sequale of childhood rhumatic fever, were significantly less prevalent (Kaunitz, et al., 1985; Sachs, et al., 1988). Physicians, however, had turned their attention to the infant; having concluded

that if pregnancy and childbirth were no longer dangerous for middle class women, it certainly was for their infants, the physicians' second patient.

By making the infant the focus of his concerns, the physician maintained the ideological position that parturition was categorically a legitimate biomedical concern and the socio-legal position that attending birth was the practice of medicine (Jordan, 1980). Defining the infant as a 'legitimate patient' separate from the mother reduced the mother to womb or vessel and obliged her to submit to medical surveillance and treatment (Arms, 1975; Rothman, 1983). Physicians had retained their authority in the doctor - patient relationship and reaffirmed their need to control women's bodies and births.

The notion that birth was dangerous for the infant was not a new idea. Dr. de Lee in the 1920's had extended the public health notion of prevention into the practice of clinical obstetrics (De Lee, 1920; Leavitt, 1988). In his view unaided labor was pathogenic, like having a pitchfork driven through the perineum. He proposed that in the hospital instrumental deliveries were safer and that prophalactic surgical interventions such as an episiotomy and in some cases a cesarean section saved a woman from suffering damage to her pelvic floor and organs and saved the infant's brain from injury. It was another fifteen years before the maternal and infant mortality rates in the U.S. began to improve significantly, but once they did those improvements were associated primarily with the greater availability of skilled obstetrical care and better technological management of childbirth. So, when the infant mortality rates, which had declined steadily since the 1920's plateaued in the 1960's and the rate of still births increased slightly between 1960

and 1965, the answer seem obvious - greater application of technology to childbirth by medical specialists who had acquired additional expertise and skill in the management of high risk pregnancies (Pritchard, MacDonald, Gant, 1985; Shearer, 1993; Wertz and Wertz, 1989; Rosenblatt, 1989). Brain injury sustained either from anoxia in utero or from traumatic injury during labor and delivery was the second most common cause of neonatal deaths, and obstetricians agreed that many of these deaths could be prevented by more judicious management of women's labors and births.

Facilitated by the advent of technologies for detecting intrauterine abnormalities, the obstetric approach to pregnancy and childbirth shifted; physiological (functional) parameters began to take precedence over anatomical (structural) indicators. This shift was accompanied by a change in obstetrical goals; an undamaged infant and the timely progression of labor became more important than a vaginal delivery (Bottoms et al., 1980; O'Driscoll, et al., 1984). In order to prevent birth injuries, particularly brain injuries, surgical prophylaxis was extended to conditions previously managed vaginally (Brody and Thompson, 1981). Breech presentations, multiple births, maternal hypertension, abnormal patterns of labor (cephalopelvic disproportion), prolonged labor (dystocia), and prematurity became compelling medical indications for performing a cesarean section (Anderson and Lomas, 1984; Zoleb and Logrillo, 1989; Sachs, et al., 1983).

Maximum Strategy

For years obstetricians had thought of themselves as surgeons, of their delivery rooms as specialized operating theaters, and had operated their hospitals and maternity units like factories. Successful motherhood, like skilled obstetrical practice, became the production of the perfect baby - a flawless biological specimen (Wertz and Wertz, 1989; Rothman, 1988; Rapp, 1988). The proliferation of reproductive and obstetrical technologies facilitated the extension of medicine's militaristic metaphors to the management of pregnancy and childbirth. Thought and language fused and informed the physicians sense experiences (Stein, 1990). The worst case analysis or maximum approach, the hallmark of military strategy, became the basis for optimal obstetrical practice (Brody and Thompson, 1981; Michaelson, 1988; Burst, 1983; McBride, 1982. Labor rooms came to look like miniature intensive care units; the places where women had once labored to bring forth new life were transformed into arenas where medical specialists carried on their heroic struggles, the 'fight for life'.

Hence the hallmark of obstetrical quality as well as obstetrical progress became the prevention or the treatment of the rare disaster (Brody and Thompson, 1981). Despite efforts to classify women's pregnancies by some rational assessment of risk, a normal pregnancy or uncomplicated birth was no longer the expected outcome. As a result, whether categorized as high or low risk, all women were treated as if they were high risk. Routine decisions about the appropriate care for pregnant and parturient women were made by choosing those interventions which would make the best of the worst possible

scenario. The occurrence of complications, no matter how minor, how infrequent, or how atypical, were generalized and interpreted in a manner which rationalized biomedicine's decidedly pathological orientation and interventionistic practices. Some physicians began to perceive the failure to use all available technology as a kind of malpractice and the unwillingness of women to submit to obstetrical procedures and management as a type of child abuse. Safety justified increasing liberal and defensive use of medical surveillance and procedures in order for physicians to protect themselves from the threat of malpractice suits and to protect their patients from the tragedy of an infant death or injury (Burst, 1983; Marieskind, 1989; Hurst and Summey, 1984). The information from these new electronic devices and the application of refinements in virology, bacteriology, and genetics provided the scientific rationale and the social justification for physicians' continued insistence on treating women and their reproductive processes as unreliable and in need of medical control and manipulation (Mulligan, 1976).

Consequences of the Maximum Approach

Initially it appeared that, although radical and a marked departure from previous norms, the medical specialist's approach to infant mortality would be vindicated. The routine use of new electronic technologies and more liberal use of familiar obstetrical interventions paralleled the renewed decline in infant mortality. The use of fetal monitoring throughout labor was being credited with better outcomes for low risk as well as premature infants (Ingemarsson, et al., 1981). The presence of ominous fetal heart

patterns were often the first sign that a low risk pregnancy and normal labor were actually abnormal. Alerted to the need to "do something", obstetricians could intervene surgically to prevent the ultimate fetal disaster, the loss of an otherwise healthy, full-term infant. Emergency cesarean sections in the case of fetal distress, and prophylactic cesarean sections in the cases of prematurity and breech presentations were associated with better perinatal outcomes, particularly a reduction in neonatal mortality, the reduction of neurological sequelae (Bottoms, et al., 1980; Ingemarsson, et al., 1981).

Like most physicians, many lay persons assumed that greater technological surveillance of pregnancy and intervention into childbirth were responsible for the decline in infant mortality and even better perinatal outcomes (Shearer, 1993). The popular press was quick to applaud new techniques. Technology was the "cutting edge" of medicine and physicians who were reluctant to employ state-of-the-art technology were regarded as woefully obsolete or neglectful if not incompetent (Figge, 1990). Bad outcomes were no longer simply personal tragedies or even evidence of life's uncertainties but defacto evidence of medical negligence (Rosenblatt, 1989). The performance of available tests reflected the physician's concern; while the performance of procedures, particularly cesarean sections, testified to the physician's effort to do everything possible to ensure the mother a healthy baby (Marieskind, 1989).

During the 1970's, the use of technology and the performance of increasingly invasive procedures began to pervade the whole of reproduction, conception, pregnancy, and childbirth. Significantly, this did not represent a change in obstetrical care as much

as a purification and exaggeration of the ideas and attitudes embodied in the medical model and in the obstetricians' experiences with childbirth. Since the middle of the last century, the employment of technology has been replacing more traditional "hands on" approaches to the management of women's and couple's reproductive anxieties and problems (Figge, 1990; Brody and Thompson, 1981; Wertz and Wertz, 1989; Leavitt, 1986).

Better technology continues to offer the illusion, if not the reality, that the uncertainties of life can be mitigated via scientific knowledge of and technological control over natural processes. This approach has, in fact, made invitro fertilization possible, enabled the detection of genetic and congenital (biological) abnormalities, and in some cases resulted in the successful in-utero treatment of serious or life threatening problems in the fetus. New ways have emerged to manage the problems associated with problem or high risk pregnancies and with premature births. But, because more could be done, more had to be done; and it was simply assumed that more was better if it provided more precise knowledge of and regulation of the physiological parameters of pregnancy and childbirth.

Hence, technological innovations, designed for the diagnosis and management of reproductive problems began to invade and transform the management of both normal pregnancies and uncomplicated labors. Ultrasounds began to replace mothers' recollections of their menstrual cycles and physicians' clinical observations of womens' enlarging abdomens as the means for estimating the gestational age of the fetus and the

anticipated date of birth. Ultrasounds have also replaced touch or the Leopold maneuver to diagnose a breech presentation and position (Figge, 1990). Continuous electronic fetal monitoring replaced the traditional method of assessing the strength and duration of women's contractions by placing a hand on the top of the fundus or by observing her reactions and behavior during a contraction and of judging the well-being of the infant by intermittently listening to the fetal heart rate with a fetoscope (Prentice and Lind, 1987). As the neonatal care units evolved to treat the morbidity and mortality associated with prematurity and low birth weight, prenatal programs often run by nurses or designed to enhance the well being of the infant through care and nourishment of the mother scaled back or eliminated despite their documented success.

The increased frequency of cesarean sections can, in part, be explained as simply another technological advance. Since the turn of the twentieth century, improvements in surgical procedures and in the administration of anesthesia had made a once dramatic, life threatening procedure simply another, often more efficient, means of delivery. Now, cesarean seemed preferable to the application of high or mid forceps when a woman was unable to push effectively enough to deliver her child or to the performance of the manual manipulations necessary to turn or to deliver a breech presentation (Gilstrap, et al., 1984; Zoleb and Logrello, 1989; Graves, 1980). Subsequently, medical procedures such as the induction of labor, the artificial rupture of membranes, and the augmentation of labor oxytocin began to be substituted, often routinely, for the less predictable and less efficient process responsible for the onset and progression of labor (Brody and Thompson, 1981;

O'Driscoll, et al., 1984). Some physicians have, in fact, taken the notion that technology provides the best solutions to the extreme of proposing prophylactic cesarean sections at term rather than exposing the infant to the uncertainty and trauma of vaginal delivery.

It seems beyond reproach for doctors to be concerned with the "fetal outcome" of a birth. What seems significant is that cesarean section, which requires the most "management" by the doctor and the least "labor" by the uterus and the woman, is seen as providing the best products. Doctors have created the attitude that a cesarean delivery implies a perfect baby. (Martin, 1987, p.64)

Between 1970 and 1987, the rate of cesarean sections ballooned. In 1960, 4.5% of all births were cesarean sections; by 1970, 5.5% and by 1978, 15.2% of all live births were delivered abdominally (Anderson and Lomas, 1984). By 1985, that percentage had risen to 22.7%, and in 1987 it was 24.4%; almost one quarter of all live births in the United States were cesarean sections (Norton, et al., 1987; Taffel, et al., 1987; Zoleb and Logrillo, 1989; Baroffi, et al., 1990). The cesarean section was the most frequently performed major surgery and the repeat cesarean section the number one indicator for surgery (Marieskind, 1989). And, the projections were that the percentage of cesarean births would continue to rise for the 1990's; 28.8% in 1990, and 40.3% by 2000 (Zoleb and Logrillo, 1989).

The unprecedented use of cesarean sections was evoking concern in the medical community by the early 1980's. Perinatal mortality rates were again declining but it was unclear that the decline could even in part, be attributed to the increase in cesarean sections (O'Driscoll and Foley, 1983; Williams and Chen, 1983; Burt, et al., 1983;

Croughan-Minchane, et al., 1990; Marieskind, 1989). By 1980, the Consensus Development Conference of the National Institute of Child Health along with numerous studies had identified four medical indications responsible for rising cesarean section rates: dystocia or failure to progress, malpresentation particularly breech presentations, fetal distress, and a previous cesarean delivery (deRogt, et al., 1986; Gilstrap et al., 1984). Yet routine cesarean sections have been shown neither to be categorically necessary nor to guarantee better outcomes than a vaginal delivery. Some studies, in fact, demonstrated reductions in perinatal death rates which were concurrent with significant reductions in particular hospitals' cesarean section rates (Williams and Chen, 1983), while other studies were beginning to suggest that social rather than medical factors were the primary predictors of cesarean section (Shearer, 1993).

In 1980, dystocia was the leading indication for the performance of a primary cesarean delivery, accounting for about 10% of all births in the U.S. Dystocia or prolonged labor is a diagnosis which depends on physician's expectations of how quickly the infant should be born after the onset of labor. Currently, the clearest, although not universally adopted, standard for normal labor is twelve hours. This standard appears to have been established clinically by O'Driscoll and colleagues during the 1970's at the National Maternity Hospital in Dublin, and represented graphically by Friedman's labor chart (Boylan, 1989; Davis-Floyd, 1992)

Progress or effective labor is then defined as dilatation of the cervix at the minimal rate of one centimeter an hour, full dilatation, 10 cm, in ten hours and completion of the

second stage of labor, delivery, within two hours (O'Driscoll, et al., 1984; Boylan, 1989). A slower rate of progression, failure to progress, warrants the diagnosis of dystocia and constitutes a clinical indication for medical intervention. The only significant medical debate was how to manage or intervene once the diagnosis of dystocia was made, whether to augment labor with oxytocin so that women might deliver vaginally or to deliver the infant abdominally (Boylan, 1989; O'Driscoll, 1984; Neuhoff, et al., 1989; Anderson and Lomas, 1984). In either case, the woman's body, her uterus was determined, on the basis of an apparently rational criteria, to be inadequate, "...a primary failure of the cervix to dilate..." (O'Driscoll, et al., 1984, p.489). In the end, the physician's view of childbirth as precarious and uncertain is vindicated; and the physician remains the hero, the essential actor in the fight for life and death. If he performs a cesarean section he has saved the infant from the trauma of a prolonged labor; and if he successfully augments the mother's labor so that she delivers vaginally within twelve hours as O'Driscoll and colleagues recommend, he has saved the woman from suffering the ordeal of a prolonged labor.

Medical Management of Breech Presentations

In 1959, Wright proposed that the relatively high rates of perinatal morbidity and mortality associated with breech births could be decreased delivering breech presentations abdominally. By 1970, 11.6% of the breech presentations were delivered by cesarean section; by 1985, over 79% were delivered by cesarean section (Croughan-Minihane, et al., 1990, p.821). There is, however, little experimental evidence available

to support the efficacy of a routine cesarean birth for full term infants who present as frank rather than footling breeches and are not exceptionally large infants (Sachs, et al., 1983). Other studies have suggested that the most significant difference in outcomes for vaginally and abdominally delivered breech presentations was that there were fewer complications for the mother (Anderson and Lomas, 1984; Collea, Chein, Quilligan, 1980). The neurological sequelae, such as head trauma, neonatal seizures, cerebral palsy, and developmental delays often attributed to breech births, were more often than not related to other causes, particularly prematurity and in some instances congenital abnormalities (Crougham-Minihan, et al., 1990; Graves, 1980). Today, the most immediate danger of a breech presentation may not lie in the presentation itself, but in the fact that younger physicians have had neither the training or experience to handle vaginal breech deliveries nor to perform the procedure of external cephalic version which would make at least 50% of the breech deliveries unnecessary (Graves, 1980; Anderson and Lomas, 1984; Jordan, 1984; Van Darsten, Schifren, Wallace, 1981). Without the requisite knowledge, the performance of such procedures could be as or maybe more dangerous than a cesarean section for the infant if not the mother.

Medical Management of Fetal Distress

Fetal distress is not a new term or reason for performing a cesarean section. But it is a term that is yet to be explicitly defined, and it is a rationale for doing a cesarean section which escalated when electronic fetal monitoring (EFM) became the routine

method for monitoring the labors of all women. Electronic fetal monitoring began in the 1970's and was initially used to more closely monitor the effects of labor on infants already known to be high risk, i.e., premature, low birth weight. The relationships between obstetric complications, fetal anoxia, and neurological sequelae had been known since the mid 1800's. It was then reasoned that closer, more exact monitoring of the infant would facilitate earlier detection of fetal anoxia, which in turn would allow the obstetrician to intervene before there was serious neurological damage or fetal decompensation (Ingemarsson et al, 1981). In fact, the early clinical results of monitored high risk infants were promising, so promising, in fact, that EFM was seen as a superior way to monitor the well being of all infants during their mothers labor (McCusker, et al.,1988; Prentice and Lind, 1987). Since abnormal tracings, specifically the absence of fetal heart rate variability, was often the first detectible sign of abnormality in "low risk" patients, monitoring served as the ultimate screening for "high risk" (Ingemarsson et al, 1981; MacDonald, et al., 1985). The large (13,025 women) Dublin Study, which compared the outcomes of women monitored by EFM administered with a fetal scalp electrode and external tocodynamometer with those monitored at least every 15 minutes by auscultation for 60 seconds between contractions, in fact, reported fewer incidences of neonatal seizures and persistent neurological signs in the EFM group (MacDonald, et al., 1985).

Despite the forementioned results, there still remains serious questions about whether the routine use of electronic fetal monitoring can be justified. On the basis of the Dublin

study, it could be anticipated that approximately one out of every four or five hundred infants might derive benefits from continuous electronic fetal monitoring (McDonald, et al., 1985). As early as 1980, it was widely reported in the medical literature that patterns of EFM typically associated with fetal distress were false positives in between 50 - 80% of the patients (Shearer, 1993; Haesslein and Niswander, 1980). In their own study, Haesslein and Niswander (1980) found that EFM tracings wrongly indicated fetal distress about 75% of the time. And, while fetal scalp blood sampling to confirm acidosis in the infant has somewhat reduced the false positive diagnosis of fetal distress, almost without exception continuous electronic fetal monitoring has resulted in a significant increase in the numbers and rate of cesarean sections (Anderson and Lomas, 1984; McCusker, et al., 1988; Kozak, 1989). Besides the fact that a cesarean birth is not without significant dangers of increased mortality and morbidity for both mother (i.e., infection, hemorrhage, embolus) and her infant (i.e., iatrogenic prematurity and respiratory distress), there is evidence that while periods of hypoxia are not desirable, they are usually well tolerated by the fetus unless there has been pre-existing chronic fetal distress (i.e., interuterine growth retardation, congenital abnormalities incompatible with life) (Prentice and Lind, 1987; de Regt, et al., 1986; Haesslein and Niswander, 1980; McCusker, et al., 1988; Shearer, 1993; Marieskind, 1989). Current evidence, in fact indicates that many brain injuries which result in neurological impairments such as mental retardation and cerebral palsy occurred before labor and could not have been prevented by a cesarean delivery.

"Once a Cesarean - Always a Cesarean"

For the past 75 years the primary indicator for a cesarean section has been the presence of the scar from a previous cesarean section. Fueled by physicians' fear that the scar of a previous cesarean could not withstand the strain of active labor, obstetrical policies and practices continue to be based on Craigin's 1916 dictum - "Once a cesarean section always a cesarean." (Cohen and Estner, 1983a; Kirk, et al., 1990). Consequently, as the numbers of primary cesarean sections, particularly for dystocia in primary gravidas, began to escalate so did the incidence of repeat cesarean sections. In 1970, about 25% of the cesarean sections were repeat procedures, by the early 1980's, 30%, and by 1988, 35% of the cesarean sections were repeat procedures (Shearer, 1993). Obstetricians not only do not trust women's bodies to work effectively; they do not trust women's bodies to be able to heal adequately.

However, as the incidence of repeat cesarean sections began to escalate, activist consumers as well as medical policy making bodies and task forces began to reconsider the rationale for and the benefits of the procedure when the only indication for it was a previous cesarean. Cautiously it was suggested even by some of the experts that vaginal delivery, especially after a transverse low-segment cesarean, might be safe, and the American College of Obstetricians and Gynecologists conceded that "...an attempt at vaginal delivery after cesarean childbirth appears to be an acceptable option." (Cohen and Estner, 1983, p.97). Despite physicians' graphic accounts of uterine rupture and tragic

consequences of maternal and infant mortality, it rarely happens and it is rarely dramatic or life threatening.

To begin with, uterine incisions usually heal very well. There is some indication that the uterus may heal through the regeneration of the muscle fibers rather than scar tissue. Often physicians are unable to find the original incision in the uterus even in women they had previously sectioned. Usually, there is no evidence of uterine scar disruption.

In those rare circumstances that a scar is unstable and does separate, an event which happens in approximately 0.5% with a horizontal lower segment incision and between 1 and 3% for a classical midline incision, it is more likely to do so during pregnancy under the strain of the enlarging fetus (Cohen and Estner, 1983). Moreover, the uterus does not blow apart as the term rupture implies, but opens gently and neatly more like the separation of a seam than the explosion of a balloon. Most reported "ruptures" were windows or dehescences which were of no clinical significance and were discovered incidentally at the time of a repeat cesarean (Cohen and Estner, 1983). Unlike uterine ruptures known to occur when the uterus is hyperstimulated with oxytocic drugs or damaged as a result of obstetric or gynecological manipulations, ruptures through poorly healed scars rarely result in profuse bleeding and shock or in loss of either life or fertility (Harris, 1953).

Despite the fact that maternal and fetal losses are far greater with repeat cesarean section than with vaginal birth after a cesarean (VBAC), little has changed. Over 90% of the women who have had a previous cesarean are still being delivered by elective surgery

in over 50% of the hospitals (Kirk, et al., 1990). By 1989, about 10% of the women who had had a cesarean section subsequently delivered vaginally (Marieskind, 1989). Despite the medical safety and success of vaginal birth after a cesarean section and even the recommendation of the American College of Obstetricians and Gynecologists that a woman with a previous, low transverse cesarean should be encouraged and counseled to attempt labor, the rates of planned cesarean sections remain high.

Although the rate of cesarean section appears to have declined some in recent years, women still have better than a 1 in 5 chance that their infant will be delivered abdominally rather than vaginally. The reasons for this appear to be complex and multifaceted. American obstetricians are not trained in the management of normal, uncomplicated birth. Few medical students or obstetrical residents have simply sat with a woman for the duration of even a single labor. Hence, they do not really know how long it takes to get the job done. Variations can not be differentiated from complications. Lack of experience in conjunction with medical training predisposes them to look for reasons to intervene rather than not to do so.

Since physical problems are assumed to have physical causes, it is also assumed that they also required physical interventions. The role that anxiety, fear, or anger play in labor disturbances (dystocia) or in episodes of fetal distress remain unconsidered and in fact exacerbated by hospital routines and routine obstetrical procedures. In turn, the use of one obstetrical procedure or intervention often leads to another and another. Inactivity during labor, electronic fetal monitoring, rupture of membranes, and epidural anesthesia

greatly increase the diagnosis of dystocia and fetal distress, greatly increasing women's chances of having an abdominal rather than vaginal birth (Brody and Thompson, 1982).

By the mid 1980's, however, an even more disturbing trend was evident; more medical procedures (fetal monitoring, induction, stimulation of labor with oxytocin, artificial rupture of membranes, administration of epidural anesthesia) and more operative procedures were being performed to women who had had healthy pregnancies and had begun labor with minimal risks of complications (Baruffi, et al., 1994). In other words, higher socioeconomic women with the lowest medical risks were receiving the most medical interventions including a disproportionate number of cesarean sections (Hurst and Summey, 1984). Data from the 1980 U.S. Natality Survey revealed a 25% higher primary cesarean section rate among college educated women than those who had not completed high school. In a cohort study, Gould and associates (1989) reviewed more than 245,000 birth certificates (1982 and 1983) in Los Angeles County, California in order to determine if there was a relationship between socioeconomic status and the rate of primary cesarean section. They found that abdominal delivery was 76% more frequent in the group with a median family income > \$30,000 than in the group with a median family income < \$11,000. Significantly, the infants born to the higher income group were found to be less likely to be premature, or low birth weight, but they were more likely to be born by cesarean section if there was a breech presentation, any sign of fetal distress, or other labor complication. De Regt and colleagues (1986) reviewed 65,647 deliveries in four Brooklyn hospitals between 1977 and 1982. They found that private

physicians performed significantly more cesarean sections than house officers and attending physicians, and that private patients giving birth to their first child were significantly more likely than clinic patients to have a cesarean delivery if a diagnosis of dystocia, malpresentation, or fetal distress had been made. Shearer's (1993) analysis of demographic factors most clearly associated with the likelihood of having a cesarean delivery revealed a profile of the woman most likely to have a cesarean section as white, 35 years old or over, married, lived in the South or Northeast, had private insurance and utilized either a large hospital (>300 beds) or a private non/profit or proprietary hospital (Shearer, 1993, p.1228).

Most recently, the Advance Report of Final Natality Statistics 1992 and 1993 continue to report that the six most prevalent obstetrical procedures, electronic fetal monitoring (EFM), ultrasound, amniocentesis, induction and stimulation of labor and tocolysis were used more frequently if the mother had twelve or more years of schooling (Ventura, et al., 1995). These same reports also documented that for mothers with thirteen or more years of education, breech presentation, premature rupture of membranes, dystocia (prolonged labor or cephalopelvic disproportion) were most often given as the reason for performing a cesarean. For mothers with less than thirteen years of education, however, the presence of meconium or fetal distress were the most frequently reported complications given to explain the performance of an abdominal delivery. In attempting to address the significance of the apparent mal-distribution of obstetrical services, Hurst and Summy observed:

If cesarean deliveries are being done for medical reasons alone, we should see any variations in the rates explained by medical risk, and the highest rates among high-risk women. If instead an inverse care law is in operation, we would find the opposite - more cesarean among low risk women and variation explained by factors other than medical need. (Hurst and Summey, 1984, p.622).

Women's Delicate Condition

The attitudes and practices which made active, prophylactic obstetrics the prevailing method of practice early in the twentieth century continue more or less unabated. Gender ideologies and class stereotypes which prevailed when birth moved into the hospital and obstetrics became America's way of doing birth have remained deeply imbedded in the mother - obstetrician relationship. As a result, essentially Victorian notions about the effects of urbanization, rising social status (middle class) and education on women and childbearing persist.

Victorian America generally agreed that respectable urban women were delicate and nervous and that urban women of the upper classes seldom enjoyed natural or physiological childbirth. Physicians of the time attributed their increased difficulties to a variety of factors, most notably lessened muscular power and strength due to both late marriages and fashionable lifestyles; and the untoward effects of education which in conjunction with the wearing of corsets and high heeled shoes were thought to constrict the pelvis (Haller and Haller, 1974). These women's childbearing problems were further complicated by the effects of civilization itself. Because of the greater demands for brain

force in urban workers, it was assumed by many that children's heads were becoming larger to accommodate the increased need for cranial mass. Achieving motherhood would, for many women have been intolerable if it had not been for the invention of forceps which permitted women with small pelvises or large infants to give birth.

By the 1840's, America's middle classes had established themselves as a major social and economic force. However, after the Civil War, they found themselves faced with bewildering and conflicting roles of a newly industrialized society and having to carve a middle class ethic from the remains of traditional society and the challenges of post-war technology (Haller and Haller, 1974; Houghton, 1957). As a result, society was changing on multiple fronts, everyday life was being rationalized, the comforts of unquestionable belief was dissolving (Gay, 1984). Respectable society discouraged the direct expression and public gratification of bodily needs, and the thresholds for disease of shame, disgust, and physical pain had diminished.

There was a clear sense that equality and education for women threatened the preservation of society (state and family). Women's disregard for household duties upset the patriarchal household. The reliable performance of domestic duties appeared to depend on shoring up the narratives which controlled by difference, discretely separating subject and object, public and private, active and passive - categories intimately linked to the radical dualism of masculine and feminine (Schiebinger, 1989; Rowbotham, 1989). Contrasting but complementary gender ideals emerged. Men, particularly the white, middle class professional male were endowed with the attributes of a gentleman such as

rationality, physical strength, fearlessness, which both explained the evolution of culture and made them fit for the competition of the public sphere. Middle class women, on the other hand, were the "legitimate muse of emotion" (Rowbotham, 1989, p.19). Holding the family together was defined as an enormous task for which the attributes of self-sacrifice, domesticity, charm, gentleness, dependency, and submissiveness were the requisite attributes. This dichotomy between male strength and rationality and female emotionality and vulnerability was further elaborated in physician's construction of medical explanations and treatments (Haller and Haller, 1974; Martin, 1986).

In the context of giving birth, conventional class stereotypes and gender ideals reinforce the dominant position of the physician and "his" employment of activist, maximum strategy obstetrics. The very attributes which made women respectable also predisposed them to an array of medical interventions and the iatrogenic effects of this approach. Physiological or natural birth requires that the mother take an active role, demonstrating her physical endurance but also her intellectual capacity to make informed, prudent choices for herself, her child and often her family. However, the mother who deliberately attempts to avoid either intrusive surveillance of her pregnancy or an anesthetized, electronically monitored labor, and an instrumental delivery must behave in ways that conflict with the norms of gender-prescribed behaviors. Hence she is likely to find herself at odds with her obstetrician and confronted with the fact that the best way to ensure not only a "natural" childbirth experience but an active participatory role for

herself and her partner is to seek an alternative birth attendant and/or an alternative place for birth (Sakola, 1993; Baruffi, et al., 1984; Cohen and Estner, 1983; Richards, 1987).

The focus of the present struggle centers around the issues of power and control. Who is in control of birth? Who is entitled to make critical decisions about what is to be done? And, who determines what is to be considered a "normal" birth? In the North American birth culture, decision making power has clearly not been a lay prerogative. Once birth moved into the hospital, women and their families were relieved of these responsibilities by 'qualified' medical experts. Women who seriously attempted to have a natural birth experience were in effect challenging this arrangement and the assumptions which made it reasonable. They wanted control over their births. They tended to view their bodies as their own, see childbirth as part of their total sexuality, and pregnancy and labor as normal physiological processes. And, they preferred to be supported by family and friends during this time rather than by strangers and technology. These goals present quite a problem for the traditional medical practitioner, who brings a very different ideology, and numerous years of technological training to the obstetrical relationship and to the organization of birthing (Romalis, 1981, p. 87).

In the past two decades, women's search for alternatives to medicalized birth has taken them outside modern obstetrical system and its institutions. In doing so, women have made childbirth and reproduction political issues, thereby challenging the conventional wisdom that medical progress emanates from break-throughs in the biological sciences or advances in biomedical technology (Boyce and Michael, 1976;

Reiser, 1978). They have also challenged the view that biomedical professionals organize health care and make medical decisions for laymen (Kleinman, 1980; Romalis, 1981; Rothman, 1981).

Midwifery and midwives are not simply lesser forms of obstetrical practices and practitioners; they are part of another system for doing birth; and they represent another view of the world. By embracing these alternatives, American women have taken a major role in the restructuring of American society, the rethinking of scientific paradigms, and have played a major role in making the American system of birthing more obviously, and legitimately pluralistic.

CHAPTER IV: Pluralization of the U.S. Medical System: The Reemergence of the Midwife

Medical Pluralism: Definition of a Concept

A society's medical system is said to be pluralistic when there is more than one medical tradition, each with its theories, practitioners, therapies, and facilities, available and given expression within the society's institutions (Beals, 1976; Leslie, 1977; Kleinman, 1980; Sussman, 1981). Since medical thought, like other aspects of social thought, not only deals with the pragmatic aspects of life and sickness but constructs meaningful explanations, the various aspects of a particular medical tradition reflect and give expression to a particular worldview. Therefore, the presence of different ideas about the causes of human misfortune and medical problems and the meaning of birth and death constitute prima facie evidence not only of different approaches to perceiving and treating sickness but of different ways of perceiving and understanding reality. Beals (1976) described the cultural context of medical pluralism in South India as:

...the presence of plural medical philosophies is a reflection of a generally pluralized conception of the Universe. There are many gods, many roads to Heaven, many scriptures, many intellectual traditions and many kinds of people. (Beals, 1976, p.185-6)

The Character of a Pluralistic Medical System

Alternative Medical Traditions

Although the U.S. medical system was obviously and selfconsciously pluralistic throughout the nineteenth century, the current descriptions of and knowledge about pluralistic medical systems has been derived primarily from ethnographic studies of medical theories, practitioners, and treatments in the developing societies of the Third World. There, medical pluralism was largely attributed to the presence of more than one indigenous medical tradition and more commonly to the introduction of biomedicine as the alternative to the established folk and scholarly traditions (Dunn, 1976; Kleinman, 1980; Geertz, 1977; Lee, 1980; Beals, 1976; Leslie, 1977). Dunn (1976) examined the impact of biomedicine on the practice of Chinese, Ayurvedic (Hindu), and Unani (Islam) medicine in Asia and found that different types of medical traditions were more prevalent in some social-geographical settings than others. For instance, "folk" medicine tended to dominate the local medical systems of the villages and in remote areas. Regional medical systems typically incorporated various expressions of the indigenous scholarly traditions and the newly introduced cosmopolitan or biomedical tradition. After examining the pluralism in Taiwan's medical system, Kleinman (1980) described three overlapping social sectors of healthcare which were dominated by different types of practitioners: 1) A popular sector which is dominated by laymen; 2) A folk sector which is dominated by indigenous practitioners; and 3) A professional sector which is dominated by biomedical physicians and associated para-professionals.

Since different medical traditions were typically dominant in some social sectors and geographical regions and not others, different explanations of disease, different types of practitioners, and different types of treatments were more often found in some places and in some sectors of society than others. Young (1976) and Foster (1976) contrasted the different types of disease etiologies found in non-Western medical systems with those of Western biomedicine. They found that the folk medicine in tribal societies and among "primitive" (uneducated) peoples attributed episodes of sickness to personalistic but external human or anthropomorphized causes (Foster, 1976; Young, 1976). In the ancient scholarly medical traditions of traditional societies (Chinese, Ayurvedic, Unani...), episodes of sickness were more likely attributed to naturalistic, internal causes, and explained in more physiological terms. These traditional medical societies conceptualized illness in significantly more impersonal, systematic terms, the loss of harmony of the body's basic elements - humors, ying-yang, or dosha (Foster, 1976; Foster and Anderson, 1978).

According to Jones (1982) the differences between the naturalistic, physiological theories of classical Western medicine, Hippocrates and Galen, the scientific theories of modern biomedicine parallel the two recurrent conceptualizations of the nature of reality in Western science - *Naturwissenschaft* and *Geisteswissenschaft*. The N-configuration reflects the mechanistic worldview and supports a science which is abstract, static, discrete and mediate or observed, while the G-configuration is more consistent with the organic worldview characteristic of the medieval world and supports a science which is

concrete, dynamic, continuous, and immediate or experienced (Ibid, p.287). In recent years, the Naturwissenschaft paradigm has prevailed, underwriting the philosophy of the Enlightenment, the science of physics, and the development of biomedical theories and practices. Before the incorporation of the mechanistic worldview into the theory and practice of medicine in the seventeenth century, an abstract, rational notion of sickness as disease was rarely elaborated or embraced (Shontz, 1975). Progressively, the objective presence of disease was considered and treated independently of the person who has or might acquire a particular infirmity.

...disease in biomedicine usually refers to undesirable deviations in a cluster of related physiological and chemical variables (for example, blood pressure, blood sugar, and so forth). An implicit assumption supported by observation, is that many of the values of key variables that reflect physiologic and chemical processes in man conform to narrow ranges that are common to the species as a whole. (Fabrega, 1975, p.969-970)

Practitioner Alternatives

Significantly, the introduction of a new medical tradition changes the practice of indigenous medicine as well as provides alternatives to it. Although the practitioners of the various traditions rarely meet to exchange ideas and therapies, new medical information and supplies are incorporated directly into the medical practices of established practitioners. In Punjab, India, Taylor (1976) found that traditional practitioners used biomedical medications 83% of the time and that physical exams assisted by the use of Western instrumentation were becoming more common. Closer

examination of one Ayurvedic practitioner's success suggested that his reputation as a healer was built primarily on the liberal use of sizable doses of penicillin.

Bhatia and colleagues (1975) surveyed 93 indigenous practitioners throughout India. They found that 8.6% of these traditional practitioners utilized only modern, biomedical drugs, 53.8% used primarily modern medicines, while only 25.8% used primarily indigenous medicine and 10.8% used only the drugs native to their own Ayurvedic or Unani medical tradition. Woods and Graves (1970) documented a similar phenomenon in the Guatemalan Highlands. There lay curers of the Ladino tradition had incorporated pharmaceutical preparations and hypodermic needles into their practices. In Laos, biomedical drugs and injections were adopted by traditional healers who explained the effects of these treatments in supernatural terms (Halpren, 1963 in Van Der Geest, 1982).

In Taiwan, the prestige of science was so great in the popular lay sector that practitioners of traditional medicine attempted to compete with Western medicine by attempting to demonstrate that their medical practices were also scientific (Unschuld, 1976). Here, the key to being scientific was the timely production of clearly visible changes. Hence, traditional practitioners made liberal use of rapidly acting drugs, before and after photographs and the deliberate use of grave diagnosis so that the relief of symptoms, particularly swelling would appear "miraculous". In Egypt, the dayas or traditional midwives, began to change their appearance, adopting more Western hair styles, clothes, and mannerisms even wearing white lab coats during deliveries, in order

to gain acceptability among educated women of the Egyptian middle class (Sukkary, 1981).

The emergence of new types of indigenous practitioners also appears to be a common phenomenon wherever biomedicine established itself as an alternative medical tradition (Woods and Graves, 1970; Geertz, 1977; Van Der Geest, 1982; Janzen, 1978; Beals, 1976). Ironically an important source of these new practitioners were technicians, lay curers, and "nurses" who were employed by biomedical physicians, hospitals and clinics. In India, Bhatia and colleagues (1975) attributed the rise in the numbers of injection doctors to the increasing consumer demand for specific biomedical medicines and treatments, a lag in the expansion of government sponsored biomedical clinics and hospitals, the geographical inconvenience of biomedical services, and the long standing social distances between villagers and medical practitioners who belonged to the elite strata of urban society. In Java's urban areas, Geertz (1977) found that the injection doctors supplied biomedical treatments in the context of familiar disease etiologies, thereby mediating cognitive as well as geographical and social distances between the majority of the populace and the theories and practices of biomedicine.

Another relatively new type of healer popular in Latin America is the Spiritualist who represents a cultural accommodation and personal adaptation to the realities of living in a fragmented, complex, urbanizing society (Finkler, 1980; 1981). Like the most knowledgeable and skilled of Latin America's folk healers, the curandero, the new Spiritualist offers the medical consumer considerable empirical medical knowledge,

pragmatic solutions to health and interpersonal problems (Trotter and Chavira, 1980). However, spiritualism offers explanations and treatments for sickness and misfortune devoid of witchcraft etiologies and accusations making it more feasible for individuals, particularly women, to confide in strangers and depend on them for advice, support, and validation (Finkler, 1980; 1981). The regular use of spiritualists sets the stage for the reliance on professionals rather than family networks for advice and direction in order to solve life problems. Once witchcraft is abandoned as an important etiological category, the therapies of the curandaro became less critical and less relevant. As a result, biomedical practitioners and treatments became a more acceptable way to manage grave, as opposed to non-grave, illnesses.

Throughout the Third World the demand for Western medicines, especially antibiotics and sulphonamides, grew considerably once Western medicine was introduced and the indigenous pharmacist or chemist became an important source of both biomedical medicines and medical information (Taylor, 1976; Unschuld, 1976; Van Der Geest, 1982). Pharmacists receive much of their education as well as their drugs from the world's (drug salesmen) detail men; and they in turn educate local practitioners and patients who seek the pharmacist's opinion and medicines. Nurderberg (1974) found that Ethiopian chemists were particularly appealing to clients who suffered from shameful diseases such as gonorrhoea (Van Der Geest, 1982). Wasunna and Wasunna (1974) attributed the appeal of the pharmacists' advice and medicines to their lower prices as well as readily available information about laymen's and pharmacists' previous

experience with particular drugs. Ferguson (1981) in El Salvador and Van Der Geest (1981) in Cameroon found that the indigenous pharmacists allowed prospective patients to avoid the long lines and rude treatment at the biomedical clinic.

Laymen's Health Behavior

Laymen's health behaviors not only are more varied when the medical system is pluralistic but also contribute to the presence and character of medical pluralism in their society. Unconstrained by the logic of any one medical tradition, the presence of alternative traditions increase consumers' available choices (Kleinman, 1980; Young, 1978; Romanucci-Ross, 1977). Medical supplies and therapies from various practitioners who represent different medical traditions can be used interchangeably or in various sequences depending on the layman's perception of their symptoms, response to a particular therapy, knowledge of and access to other types of practitioners and therapies and the support from and recommendations of one's family and friends (Topley, 1976; Geertz, 1977; Beals, 1976; Kleinman, 1980; Frankenberg and Leeson, 1976).

Typically, laymen's perceptions of their state of health and treatment needs are based on experiencing or preventing "critical" symptoms rather than medical categories or diseases (Beals, 1976; Worsley, 1982; Leventhal, 1982; Hostetler, 1976). This results in potentially complex patterns of health behaviors that Romanucci-Ross (1977) and Kleinman (1980) described as being organized in hierarchies of resort. Hierarchies of resort are, in fact, actual histories of illness behavior describing the means by which

people's auto-diagnosis of their problems guide their attempts to maintain or restore health. In Mauritius, a multi-ethnic island society, 500 miles from Madagascar, Sussman (1981) found that individuals' varied patterns of health behavior, hierarchies of resort, gave expression to their belief that no one therapeutic system could possibly deal with all possible causes of disease and that by being able to use all available medical traditions increased their chances of "being cured".

Kleinman (1980) concluded that the Taiwanese approach to extraordinary illness care generally fell into three recognizable patterns: simultaneous resort, hierarchical resort - exclusive type, and hierarchical resort - mixed type. The simultaneous pattern of resort involved the use of several practitioners, often from various sectors of the community, to treat various aspects of illness. This pattern of resort was most commonly observed when the sickness was perceived as serious, when the symptoms were attributed to multiple etiologies, or when the cause and the effects of a sickness were understood to require simultaneous but separate treatments. The pattern of hierarchical resort - exclusive type was observed by Kleinman (1980) to be used most frequently by Taiwanese adults when they were experiencing an acute but non-life threatening episode of sickness. If the disease was self-limiting or the initial treatment was successful, only one practitioner or therapy would be used. If the initial practitioner's treatment was not successful, then practitioners were sought one at a time until the desired outcome was obtained or the treatment effort was abandoned. In Taiwan this strategy usually involved a typical progression of steps - self treatment, treatment recommended or instituted by

one's social network, resort to Chinese or Western practitioners, the use of the alternate style of practitioner, resort to sacred folk practitioners and therapies, or giving up. The whole pattern was most likely to unfold and even merge into the pattern of hierarchical resort - mixed type when an illness became chronic or when the success of various practitioners' therapies were only equivocal.

When illnesses, particularly those of adults, became chronic and/or progressive and there are no fixed strategies for dealing with them, the most common recourse is to adopt an increasingly eclectic strategy which includes the use of sacred cures and healers.

This pattern of health behavior, hierarchical resort - mixed type, is characterized by simultaneous as well as progressive use of self-treatment, popular care, biomedical and Chinese treatments, and the use of sacred practitioners (Kleinman, 1980). This goes on until the sickness is resolved in either cure or death or until the individual or his family gives up.

Application of Medical Pluralism to Describe the Contemporary Character of the U.S. Medical System

The ability to depersonalize causality in all spheres of thought was generally perceived as a major step forward in the evolution of culture (Foster, 1976). Abstract scientific theories were assumed to be more perfect, universal representations of reality, and therefore, able to transcend the here-to-fore limits of culture and belief. Biomedical therapies appeared capable of treating many types of illness independent of immediate

personal considerations and without becoming entangled in networks of social relationships (Fabrega, 1975). Embedded in modern Western narratives of universality and progress, medical pluralism or its specific manifestations (i.e., injection doctors, indigenous practitioners, unrestricted availability of Western medications, and eclectic patterns of health behavior) were viewed as being transitory phenomena which would resolve as societies modernized and as people became more rational and more accepting of materialistic life and urban industrial life styles. Consequently, biomedicine was expected to prevail, and because U.S. society was already modern and biomedicine effectively dominated this society's health care system, medical pluralism was perceived as a developmental stage rather than a historical phenomenon and an inherent characteristic of all complex societies (Leslie, 1977). Largely denied, the pluralism in our medical system was not apparent until there emerged a larger social discourse which involved a rethinking of our mechanistic worldview, of our embedding faith in the methods and truths of science and in the solutions of technology, and in the advice of professionals (Capra, 1982; Starr, 1982; Culler, 1982; Calinesciu, 1987). Since, the limitations and failings of biomedicine have become more apparent and alternative medical theories and practice have become more appealing (Engle, 1977; 1980; Boyce and Michael, 1976; Capra, 1982; Rosenberg, 1977).

Contemporary Pluralization of the U.S. Medical System

The homogeneity of the U.S. medical system has always been more a of a modern ideal than a social or intellectual reality. According to Leslie (1977), "...the pluralistic health cultures of laymen are readily acknowledged in our own society, we ignore the corresponding pluralism of our medical system when we talk about it as if it were only the structures of hospitals, clinics, colleges, and other agencies of 'modern' or 'scientific' medicine." (p.512) However, as growing numbers of consumers, many of whom are educated and from America's middle classes, find conventional biomedical practitioners and therapies inadequate or insensitive, they have turned to alternative practitioners and therapies in order to address their needs. A recent study published in *The New England Journal of Medicine* found that more than one third of the respondents were choosing alternative methods because of biomedical physicians' emphasis on diagnostic testing and on drug therapy without listening to individuals' perceptions of their problems or their responses to treatment. As a result, the pluralism already inherent in the U.S. medical system has become more evident and increasingly legitimate. In addition, new types of practitioners and therapies have evolved to meet particular needs which are not satisfied by conventional biomedical practitioners and institutions.

Formerly repressed, non-biomedical traditions of health care and their associated practitioners (i.e., chiropractors, homeopaths) became more visible and found new sources of clientele and practitioners (Naisbitt, 1982; Gevitz, 1989; The Burton Goldberg Group, 1994). New alternatives began to emerge to meet growing demands for

humanistic care and for less toxic and invasive therapies. Healers from ancient non-Western medical traditions (i.e., Chinese Medicine, Ayurvedic or Hindu Medicine, even American Indian Medicine) appealed to some medical consumers who were interested in new ideas about sickness (illness and disease) and to others who were interested in trying particular therapies these practitioners offered. The therapeutic effects of acupuncture, herbs, meditation, prayer, massage, even social-religious rituals are less frequently labeled "quackery" and more often suggested, sometimes by biomedical physicians, as adjuncts to conventional biomedical therapies (Dossey, 1982; 1989; The Burton Goldberg Group, 1994; Gevitz, 1988).

A new genre of quasi-popular, quasi-medical literature began to emerge providing educated laymen not only more information about biomedical diseases and treatments but alternative ways of perceiving the body, systems of chakras (Hindu) and of meridians (Chinese) rather than anatomical organ systems (Gerber, 1988; Chopra, 1993; Kaptchuk, 1983; The Boston Women's Health Collective, 1994; The Burton Goldberg Group, 1994). Significantly these as well as other publications often put as much or more emphasis on the phenomena of health and healing as they placed on identifying specific diseases and treating various symptoms. New types of practitioners have emerged from the popular sector of the health care system (i.e., lay midwives, dulas, montrices, childbirth educators), while others (i.e. nurse midwives and other types of advanced nurse practitioners, physical therapists, podiatrists, registered nutritionists, psychologists, and ophthalmologists) have emerged from the biomedical hierarchy, and have sought changes

in their respective practice acts enabling them to offer some medical services without the direct supervision of the physician.

The Reemergence of the Midwife

Nowhere has the pluralization of the U.S. medical system been more evident than in the proliferation of practitioner roles and consumer options within the U.S. birthing system. This contemporary diversity in opinions about the nature and management of childbirth reflects our social as well as our cultural diversity (Leavitt, 1986). And, although midwifery in modern America had been much maligned, the idea of midwifery remained culturally available. It had been and could again be an alternative to medicalized birth, one that would appeal to women who wanted a "natural childbirth experience" and would give concrete expression to a definition of birth as an important life event and a normal physiological process (Burst, 1983; Rothman, 1981; Armstrong and Feldman, 1990; Gaskin, 1978). Midwives, unlike obstetricians, are philosophically predisposed to observe carefully, to trust women's bodies, and to provide support while allowing nature, the physiological process of childbirth to work. Denied the unlimited use of instruments, midwives learned to use their observational skills to monitor women's progress and their hands and non-instrumental means for assisting women if their labors became prolonged or their birth became increasingly difficult or overtly complicated (Rothman, 1981; Wertz and Wertz, 1989).

Table 4.1
Contrasting Views of Childbirth

Midwifery	Obstetrics
Business of Women	Business of Male-Medical Professionals
Focus on the natural organic processes	Focus on the mechanics of labor and delivery
Perception: "women's bodies can be trusted to work"	Perception: "birth is precarious and risky"
A Life Event	A Type of Illness or Disease
Conceptualized: birth is a bio-psycho-phenomenon	Conceptualized: birth is a biological phenomenon
Routine management: supportive caring and use of non-intrusive interventions	Routine management: instrumental monitoring and timely, skilled instrumental and surgical interventions
Role of Attendant: active observation, supportive assistance, referral if birth processes become abnormal or unmanageably complicated	Role of Attendant: monitor progress, measure degree of deviance from normal, and intervene to prevent unfortunate outcomes
Birthing Sites: places which facilitate women feeling physically and psychologically safe and socially comfortable	Birthing Sites: places which facilitate safe medical practice and physician's efficiency
Perception of Women: competent "clients"	Perception of Women: unreliable "patients"
Decisionmaking: the woman in collaboration with family/friends and birth attendant(s)	Decisionmaking: the prerogative of medical medical authorities, particularly the physician

The definition of birth as a normal natural process provided the rationale necessary to make birthing rooms and homes safe, even preferable, sites for birth. Likewise, new types of birth attendants were necessary to attend women in these new birthing sites, ones who were not dependent on sophisticated biotechnology to monitor the progression of a woman's labor and to assess the well being of the mother and her infant (Gaskin, 1978; Davis, 1981; Rothman, 1981). However, by the time women were

again looking for midwives to attend their births, few were available. The (black) granny, one of America's last traditional midwives, all but disappeared once hospitals in the deep South were integrated in the 1960's. Ethnic midwives, the (Mexican-American) parteras continued to practice along the border and in the barrios of the American Southwest (Kay, 1977; 1978). They were, however, neither available to nor acceptable birth attendants for most middle class women who were interested in having an alternative birth experience. And, although there were a few nurse-midwives who practiced in geographically remote areas and among the economically deprived in urban areas, they were not birth attendants that private patients routinely had access to or even knew about (Rothman, 1981).

In response, a new type of midwife, the lay, independent, or direct-entry midwife evolved as women began to assist each other and to learn about birth from their own and other women's births and from consulting available authoritative resources, including medical texts and willing physicians (Gaskin, 1978; Butter and Kay, 1990). Individually and collectively these women made it possible for other women to have the physiologically natural, family centered birth experience they wanted by moving birth out of the hospital into their own homes or into the more home-like environment of a birthing center. In the hands of the new lay-midwife, a pragmatic, but clear concept of "ordinary" or normal birth began to reemerge and practices which were intended to keep a woman's pregnancy and birth normal began to evolve (Gaskin, 1978).

The reinvention of midwifery in the form of the lay-midwife, in many respects, was both a reclamation of normal birth, as women's business, and a recreation of the traditional division between women's practice of social medicine and the physician's practice of heroic, extraordinary medicine. In their view, the routine use of invasive technology and of surgical procedures should never have been applied to ordinary births (Arms, 1975). Lay-midwives do not deny the possibility that serious complications can occur; however, it is only at such times lay-midwives utilize physicians and hospitals or recommend medical treatment, the use of powerful drugs, instruments, or surgery, to the women whose births they attend.

Lay-Midwifery Along Texas' Gulf Coast
Discovering the Contemporary Lay-Midwife

Lay-Midwifery - The Changing Context of Homebirth

By the end of the 1970's, alternative births were not only available in Houston, but were beginning to change one local public health nurse's typical perception of homebirth and her decisions about making the obligatory visit to women whose infants had been born at home. Rather than make the visits herself, M.S. often recommended that students from a university nursing school make the visits. In an orientation session she explained that at one time homebirths were an indicator of poverty and social disadvantage. It was not unusual to find numerous medical and social problems. Women often needed help finding suitable clothing for their infants and help preparing formula in order to avoid environmentally induced gastric problems (diarrhea, vomiting). Many of the homes she visited, even within the city limits, still did not have indoor plumbing; and contaminated well water was recurring problem. Now, however, the homebirths were occurring primarily among well nourished, well educated, very conscientious women who knew how to take care of themselves and their children. M.S. went on to explain that Houston's indigent are no longer born at home but in the county hospital(s). And, although a public health nursing visit is not required by law as is the case when there has been a homebirth, it was these mothers who were most likely to experience complications such as toxemia,

or nutritional deficits or have premature and low birth weight infants. In addition, these mothers were also likely to be young (< 19 yrs), educationally and economically marginal, and lacking material resources to care for their infants. She also identified that family systems of childcare were less intact; she knew of fewer incidence of mothers and grandmothers who were available and/or willing to take over and raise the children of their young daughters. Although poor young women are having their babies in hospitals, the care of their children has become less certain. By contrast, M.S. was finding that middle class women, who were having their children at home, were more often healthy, health conscious and typically their infants thrived with little or no intervention from biomedical professionals.

Lay-Midwifery in Houston - Legal Basis for Practice

In Texas, the practice of midwifery, the attending of women in childbirth, has never been restricted to physicians or defined in legal status as the practice of medicine. Unlike many other states which had outlawed the practice of midwifery via legislative acts or court decisions (Gordon, 1982; Mehl, 1977; Arms, 1975), the Texas Appellate Courts in 1956 (*Banti vs State of Texas*) specifically ruled that assisting a woman in childbirth was NOT the unlicensed practice of medicine. The court found that childbirth was a normal function of womanhood and that attending a parturient woman was not the same as treating or offering to treat a disease, a disorder, a deformity, or an injury (Texas Medicine, 1981; Schreiber and Philpott, 1978).

In 1956, this court decision allowed the indigenous midwives, grannies and parteras, to continue practicing. Midwifery, women's traditional birthing system, and the midwife, women's traditional birth attendant, were legal by virtue of not being deemed illegal. By the 1960's however, the viability of traditional midwifery was clearly diminished. Cumulative social-economic changes, including the proliferation of paved roads and privately owned automobiles, had made hospitals and doctors readily available; and the national media's representations of the safety and benefits of modern obstetrics had made medicalized birth desirable, even obligatory. In addition, various health department regulations and public health statutes effectively restricted the indigenous midwife's ability to practice, access to clients, and their incomes (Wertz and Wertz, 1977; 1989; Mongeau, Smith, Maney, 1961; Kay, 1978; Scheiber and Philpott, 1978). By 1970, the practice of traditional midwifery was virtually confined to Texas' Mexican-American communities and was located primarily in the state's border communities.

The Modern Lay-Midwife

Although the court decision, *Banti vs State of Texas*, was not enough to preserve the generalized practice of traditional indigenous midwifery in Texas, it perpetuated a social-legal climate that was not overtly prohibitive of or punitive towards midwifery or non-biomedical practitioners. The fact that midwifery was never defined legally as the practice of medicine made it easier for lay-midwifery to evolve in Texas and for lay-

midwives to emerge from the ranks of the grass root, self-help movements (i.e. childbirth educators) which sprang up throughout the U.S. in the 1960's and 1970's (Naisbett, 1982).

These women were predominantly middle class, urban, and well educated. Philosophically they, like others who sought affiliation with and through self-help and ecological organizations, were increasingly aware of the dark side of modernity and increasingly disillusioned with the utopian promises of technological solutions to/for human problems. By learning about birth through such means as pursuing formalized programs of childbirth education, self study, and by attending the births of friends and neighbors (Cobb, 1981; Hazell, 1975), these women were poised to serve a growing philosophical community. By redefining normal pregnancy and uncomplicated birth as something other than medicine, and capitalizing on the judgment of the Texas court, that attending women in childbirth was not the practice of medicine without a license, lay-midwives in Texas were able to bridge the gap between an educated, lay middle class' anatomical and mechanistic perceptions of their bodies and of the processes of pregnancy and childbirth, and their desire for participation in a more social/family centered birth. By the late 1970's, lay-midwives in Houston were establishing associations, autonomous practices, and were attending women who would never have considered a granny or partera a desirable birth attendant. According to Melissa, a lay-midwife practicing in Houston in the early 1980's, her clients typically had sufficient financial resources that they had virtually unrestricted choice of obstetricians and hospitals. At that time, her client's decision to have a lay-midwife homebirth was, in fact, a decision to incur

additional out of pocket expenses since medical insurance rarely covered the lay-midwife's charges which ranged from \$350 to \$600 in 1981.

Lay-Midwife - A Diverse Category

The term, lay-midwife or lay-midwifery, has been used in the biomedical literature, in the popular literature, and more recently in Texas legislation as if there was only one kind of lay-midwife which needed to be clearly differentiated from another type of midwife, the nurse-midwife. Lay-midwives are, in fact, a heterogenous group bound together categorically by two significant shared characteristics, namely the act of attending women in childbirth and their status as non-medical practitioners who practice outside the institutions and hierarchy of biomedicine. The contemporary middle class lay midwife is only one, although the most prominent, member of the category lay-midwife. Comments from the contemporary middle class lay-midwife informants as well as published accounts of lay-midwifery acknowledge two other identifiable groups of lay-midwives, namely indigenous midwives (i.e., parteras) and a group of women who are "called" by the Lord to become midwives.

Table 4.2**DIFFERENTIATING TYPES OF LAY-MIDWIVES****Contemporary Lay-Midwifery**

Traditional and Indigenous/Ethnic Midwives	Middle Class Lay Midwives (urban-secular)	Religiously motivated Lay Midwives Called by the Lord" (rural-Protestant Fundamentalists)
Mexican-American Parteras		
Black Grannies (virtually nonexistent)		

Generally, these three groups of lay-midwives tend to practice in different geographical areas and among different social groups. The paragon of lay-midwives, the contemporary middle class lay-midwife, is usually found in urban regions and her clients are women who, like herself, have at least a high school education and have reservations about the inherent benefits of technology and its ability to improve or ensure the naturalistic phenomena of birth. And while there is evidence that lay-midwives also practice in rural areas, among disadvantaged populations, and are sought by Mexican-American women especially in large urban areas, these practitioners are generally urban in their background, education, and in their approach to their social relationships (Gaskin, 1978).

The ethnic lay-midwife in Texas is usually a partera. She typically practices along the Mexican border or in larger urban Mexican-American communities. Typically she shares not only her clients ethnicity but their beliefs about women's needs and

predominant social role as mother. There is little documentation of the partera's practice outside Mexican-American barrios and with women of other national-ethnic backgrounds, even women from other Hispanic cultures.

Finally, there also appeared to be another group of lay-midwives emerging and practicing primarily in the rural areas of Texas where Protestant Christian fundamentalism still prevails and in fundamentalist groups in urban areas who believe that it is God's will that women experience the pain of childbirth and find spiritual and personal meaning in the Biblical account of and explanation for the human condition, the fall of man (Genesis 3:1-24). These lay-midwives reportedly believe that they were "called" by the Lord to practice midwifery and appear to be a contemporary expression of the traditional evangelical Christianity which prevailed in the American South until after World War II (Boles, 1972; Cash, 1941).

The middle class lay-midwife informants, I spoke with, especially Karen, were very concerned that they were clearly differentiated from both historical and contemporary indigenous midwives and from midwives who were called by the Lord. Although attending births was something each of my informants described as a spiritual experience and "loved to do", none of them viewed midwifery as a calling or even as a direct expression of their religious affiliations/beliefs. Rather, they characterized their midwifery practice as a business; and described the acquisition of their knowledge and skills not as a gift or a blessing but as the result of a demanding apprenticeship and continued study and experience. Karen was the most outspoken about midwives "...who

had been talking to the Lord." Having had such an apprenticeship she was convinced that they were potentially unsafe because typically they were not often invested in the study and learning she considered essential to being competent - "...she actually thought the Lord was going to tell her what to do if there was a problem..." Disgusted that such attitudes are often generalized to all lay-midwives including herself, she viewed them as a hinderance to lay-midwives as being perceived as knowledgeable and competent and to lay-midwifery as becoming more professional. Karen, in part, attributed her difficulty establishing a workable professional relationship with the obstetrician-gynecologist in Palestine to his view of midwives as ignorant, uneducated, archaic practitioners:

K: It took two years of battling back and forth with him to get to the point that we could even talk on a professional level. It was a lot of hard work; it was a lot of hard work trying to make him realize that I wasn't a fool, and that I didn't have this calling by the Lord to deliver babies. I did have some training behind me to be able to do what I did.

The academic interest in Lay-Midwifery, biomedicine's profound reactions to lay-midwifery, and the recent demand for homebirths and lay-midwife attendants was in fact an interest in, a concern about, and a demand for the emerging middle class lay-midwife. It was she, not the partera or even the "Christian" midwife, who was a potential economic competitor to the obstetrician and it was she who was challenging the legitimacy of his social as well as his medical authority. Moreover, it can be argued that the failure to differentiate among lay-midwives enables one group to be characterized in terms of the other and perpetuates the biomedical argument that the most significant characteristic of lay-midwives is that they are outside the legitimate institutions and

practice of biomedicine. By implication then, all types of lay-midwives are like the grannies, who were successfully, although perhaps unjustly, characterized at the turn of the century as uneducated, filthy, superstitious, and incompetent, as a menace to women and their children (Wertz and Wertz, 1989). Such characterizations and the evoking of pejorative imagery, no matter how misleading, justified the physician's professional concern with lay-midwifery and rationalized their demands to control it.

1983 Lay-Midwifery Act

In recent years, approximately one-third of all midwife attended, out of hospital births in the U.S. occurred in Texas (Declerq, 1992), and about 4% of the births in Texas are out of hospital and attended by midwives (SoRelle, 1984b). By 1984, it was estimated that there were between 415 and 430 lay-midwives practicing in Texas, more than any other state except California (Schier, 1984; Texas Medicine, 1984). In Houston alone, there were 59 lay-midwives registered with the City Health Department by June, 1984 (So Rolle, 1984a). In 1983, it was estimated that there were approximately 7,500 lay-midwife attended births in Texas (Texas Medicine, 1984); the city of Houston Health Department reported that 262 lay-midwife attended births had occurred in Houston (SoRelle, 1984b). In 1984, there had been 205 lay-midwife attended births by June, and lay-midwives were establishing free-standing birthing centers as well as attending homebirths.

The growth and acceptance of lay-midwifery as well as various groups' concerns about competence and professional boundaries culminated in the passage of a Lay-Midwifery Act. Today, Texas is one of ten states which explicitly permits lay-midwives to practice (Butter and Kay, 1988). Despite the protests from many obstetricians and the Texas Medical Association, "that the practice of lay-midwifery should be considered the practice of medicine and that lay-midwives should then practice under the supervision of medical practitioners." (SoRelle, 1984c, p.3), a law that recognizes lay-midwifery and allows its practice independent of direct biomedical or physician supervision was passed in 1983. Significantly, this law applies only to lay-midwives and to those who are receiving compensation for assisting with childbirth. (Texas Medicine, 1984).

Regulation of Lay-Midwifery

The 1983 Lay Midwifery Act empowered the Texas Board of Health to establish a Lay Midwifery Board which was to be composed of three lay-midwives, one certified nurse-midwife, one ACOG certified physician, one certified pediatrician, and three public representatives. The functions of the Lay Midwifery Board included 1) the establishment of requirements for an approved lay-midwifery course, 2) qualifications of instructors for the training course, 3) a lay-midwife training manual, 4) eligibility requirements for taking the training course's final exam, and 5) to issue the final exam. Successful completion of an approved lay-midwife training course is, however, not a requirement in order to practice as a lay-midwife. Those who pass the final exam receive a letter of

completion but are not entitled to represent themselves as registered or certified midwives (Texas Medicine, 1984).

As of September, 1984, lay-midwives have been required to disclose to prospective clients the limitations and scope of their practice. These disclosures, by mandate, are both verbal and in writing and must indicate that a lay-midwife only assists in normal childbirth, if the midwife has any arrangements with a local physician in the event of complication, that lay-midwives do not perform surgical procedures (C-section, episiotomy, removal of the placenta by invasive techniques), utilize forceps or instruments for extracting the fetus, and that they can administer prescription medications under the supervision of a physician (Texas Medicine, 1984). In addition, the lay-midwife must indicate whether or not she has passed the final exam approved by the Lay Midwifery Board and how to register complaints with the Department of Health.

Each year, in December, lay-midwives are required to identify themselves, in person, to the county clerk where they live and practice (Texas Medicine, 1984). At that time the lay-midwives are required to provide their name, residence, date and place of birth, and the location(s) of their practice. Although information is routinely requested about how many births, they attended in the past year, it is the individual midwife's choice to provide the requested information. At the time of identification, county clerks are expected to give each midwife the following information; a copy of Texas Department of Health's "Legal Responsibilities of Lay Midwives", a list of laboratories certified to perform standard serological tests, and the form, "Responsibilities of a Lay

Midwife". Lay-midwives are, however, responsible for the information contained within these documents whether or not the county clerk provides the specified documents.

In theory, registration is the least restrictive type of governmental regulation; but the additional option for local ordinances governing the practice of lay-midwifery, at least potentially, allows for prohibitive restrictions on practice (Butter and Kay, 1988). Other forms of regulation can be imposed at the local level. This is, in fact, what the director of the City Health Department of Houston attempted to do when he became actively involved in the controversy surrounding several problematic outcomes at lay-midwife birthing centers. In the Summer of 1984, Dr. Houghton, M.D. was actively campaigning to "...work the dickens' to convince the City Council to enact an ordinance governing lay midwifery as soon as possible. Eventually, the health director hopes to 'do something to repeal the state law' permitting lay midwives to deliver babies." (Schier, 1984a, p.1a) Houghton's initial efforts "...to require midwives to provide certified proof they have backup of a physician with full obstetrical (baby delivering and treatment) privileges at a local hospital..." (SoRelle, 1984a, p.3a) was in fact a thinly disguised attempt to utilize local ordinances to make it virtually impossible for lay-midwives to practice in Houston. At this time, lay-midwives in Houston had to require their clients to make arrangements for their own physician and hospital backup in the event that complications requiring medical intervention occurred. Obtaining physician backup was one of the most serious problems described by two of my lay-midwife informants. According to Mickey, "Once physicians know my women are going to have a home birth with a lay-midwife, they

don't want anything to do with her; he will even tell her not to call him if there are problems." In the early 1980's, according to Melissa, her clients would often get their prenatal laboratory work done at one of the City Health Department Clinics and make tentative arrangements to deliver at one of the local hospitals (often the County Hospital) in order to fulfill her requirement that they make arrangements for medical backup. Typically the biomedical system did not want to accommodate the needs of either lay-midwives or their patients. Even as Dr. Houghton was proposing his ordinance that would require lay-midwives to have certified proof of medical backup, the president of the Houston Obstetrical and Gynecological Society was being quoted as saying; "...I wouldn't suggest that members of the group do this." (SoRelle, 1984c, p.3a). By the end of the 1980's Karen described a more congenial relationship with her medical backup but continued to describe tense even hostile relationships with hospital personnel when she found it necessary to transport because of complications.

K: --Well, like for instance, we had a midwife who took a couple of clients to the hospital, and she let the hospital make a copy of the chart because she transferred these people and they needed the information. They (the hospital) turned it in to the Health Department. The Health Department said, 'you've made complaints against yourself, now we need to follow up on it -'

"What do you mean, I've made complaints against myself?"

"Well we looked at the charts you gave to the hospital and in these charts we've found deficiencies - You've made complaints against yourself by turning them over to the hospital - he was trying to help this hospital give these people proper care. Because of what she did, they turned her in" - A lot of hospitals are working with the Health Department to catch the midwives; so then they wonder why we don't want to give them any information - Because they're trying to catch us anyway they can - A mistake can be just simply not putting an initial in the right

place - 'If you've made this mistake, how many other mistakes have you made?'

More typically, however, the contempt of the hospital personnel was, according to Karen, conveyed not through such overt behavior but through the physician's and nurse's attitude towards the midwife and her offers of information and for continued support. Besides assigning implicit blame for any complications that might be occurring, attempts to offer information or assistance are often met with an attitude of superiority, "...you don't know nothing - you're stupid - you have no education...". Although education and training of this society's medical practitioners are always important public health concerns, much of the debate about the qualifications of midwives in general and the contemporary lay-midwife in particular were not so much about competence but about the power of biomedical institutions, specifically the legitimacy of their domination (regulation) of all other types of practitioners.

Autonomy of Lay-Midwifery

The 1983 legislation which provided for the registration of lay-midwives contained no requirements for training or for the demonstration of particular clinical expertise. Hence, unlike the state's registration or licensing of nurses, pharmacists, physicians, or even x-ray technicians, the act of registering midwives does not imply a judgement about competency. Theoretically, it is possible for anyone to register as a lay-midwife since registration is simply a declaration of the intent to catch babies and be financially compensated for doing so.

This, however, does not appear to be what was happening; anybody or everybody was not registering as a lay-midwife. Moreover, it would be a mistake to conclude that since the 1983 legislation did not have training or educational requirements that lay-midwives were categorically unsafe, uneducated, or unprepared to handle clinical problems when they arose. As early as the 1970's, lay-midwives in Houston were beginning to provide each other intensive, demanding apprenticeships (H.O.M.E.) and by the early 1980's, lay-midwifery schools were organized in Arizona, Colorado, Michigan, California, Texas and offering courses of study from 12 weeks to two years (Davis, 1981). Some of the programs offered primarily didactic work, others offer supervised practicums. Even though there is no apparent consensus about the structure of a lay-midwife's training there appears to be a consensus about the important medical knowledge and primary care skills that a lay-midwife must master in order to be competent. The following list was outlined in Davis (1981., p.17), A Guide to Midwifery Heart and Hands, and generally reiterated in Mickey, Melissa, and Karen's accounts of their apprenticeships:

1. do "basics" like blood pressure and urinalysis
2. monitor fetal heart tones and interpret various fetal rate patterns.
3. accurately palpate fetal position and presentation.
4. perform accurate vaginal exams and pelvic assessments.
5. know how and when to perform vaginal exams and pelvic assessments during labor.
6. determine complications in labor.

7. deal with and have experience with the mechanics of normal and complicated delivery.
8. know how to manage third stage of labor.
9. know how to deal with postpartum hemorrhage and shock.
10. be able to provide infant resuscitation.
11. know how to recognize and determine necessary treatment for vaginal tears.

By in large characterizations and pronouncements such as those made by the director of Houston's Health Department that the practice of lay-midwifery should be stopped in the interest of safety (SoRelle, 1984a; 1984c) were more often political than informative. There was either no apparent recognition that lay-midwives received and provided training and/or that medical training/education outside accredited biomedical institutions was valuable or legitimate. Moreover there was no recognition of or discussion of the differences in the types of clients that chose to have their birth at a birthing center rather than at home.

According to Karen, the local lay-midwives were not opposed to training and certification; in fact, throughout the public hearings on a city ordinance to control the practice of lay-midwifery, lay-midwives and their representatives spoke in favor of both. Their disagreement with the director of the City Health Department and with the biomedical system generally, focused on who should or was entitled to determine the educational content of lay-midwifery and to regulate the practices of lay-midwives.

Since the proposal of the 1983 legislation on lay-midwifery, lay-midwives in Texas have taken steps and organized themselves to control their own practice. The

Association of Texas Midwives was founded in 1982 with the purpose of not only influencing the legislation impacting lay-midwives but as an organization through which lay-midwives could determine their requirements for certification and govern their own practices. Karen gave the following account of Texas' lay-midwives struggle to organize, become self-governing, and establish cooperative yet autonomous relationships with biomedical regulators and practitioners.

K: ...when the midwives were trying to write their own legislation. We are trying to set it up where we can set up our own board to govern ourselves within the Texas State Department of Health Systems. Right now we are governed by the Texas Department of Health. I can't remember exactly how many people are on the board, but there are a couple of midwives, a couple of lay-midwives, a couple of doctors, a couple of CNM's. We're outnumbered basically by the system; and what we want is our own legislative board, our own governing board, midwives governing midwives.

J: Separate from certified nurse-midwives?

K: Well, we would like to incorporate the CNM's with us and we are beginning to get to a certain degree a workable system. We are trying really hard to work with them because we are all midwives. And, I understand in one of the letters that I recently read that they are beginning to see a certain amount of working together, a little more organization, for one, the ATM is coming together a little better.

J: ATM?

K: Association of Texas Midwives. They have a certification program now; I am certified through them, of course. I'm one of the first. I think I was number one; the first one to finish the certification program. It took them three years to get the program together. There is an oral test, and a written test, and there is a lot of work that goes into that. I had to put together a whole file, boxes and boxes of papers that I had to send in. Copies of charts and copies of letters of different caretakers that I have worked

with and clients that I have gotten letters from. All of these people wrote these things for me and sent them in. Then there is a system set up for grievance, and there is a system set up for certification, and also a program for education. I mean they are getting it all together. They are really doing a lot better. And what they are trying to show the health department is that we can govern ourselves and that we can train our own people.

The way the law is written right now, yes, you could go down and you could sign your name to the register and say I'm going to pop babies today. But that is what we are trying to get away from. They are trying to write the laws to where you have to go through the Association of Texas Midwives, just like a CNM has to go through ACNM.

Accounts of Local Lay-Midwives

Lay-midwifery in Houston appears to have been successful. According to the three lay-midwives interviewed, unfortunate outcomes occurred but were very rare. Mickey, after more than 500 deliveries, stated that it had been her experience that even when something went suddenly and unexpectedly wrong there had always been something she could do to stabilize the situation until the mother could get appropriate medical attention. Karen stated that it was her experience that "...80% of the time you are going to see a problem before it gets to the point where you can't handle it. And, in most cases, they are going to develop before labor ever begins." Each of the three midwives gave several instances of having to transport. During labor they indicated the usual reason was that there were persistent indications of fetal distress (i.e., heavy or significant meconium staining, decelerations in the fetal heart rate). After delivery, the primary reason to transport the mother was excessive bleeding typically caused by retained

placenta or placenta fragments. Infants are reportedly most often transported because of problems characterized by respiratory distress. These midwives deny having lost a mother, but Karen did acknowledge that one of the local lay-midwives had lost both a mother and baby. As Karen told the story:

K: The father did not realize the labor was progressing as quickly as it was. The baby was delivered before the midwife got there and the baby had some breathing problems. He didn't know what to do, panicked; he called 911. By the time the midwife got there, the baby was gone, and the mother then started having trouble with bleeding. The ambulance had left with the baby, trying to save the baby. The mother was still at home when the midwife got there; she saw what was going on, called another ambulance that didn't come out. By the time they got her to the hospital, she had bled to death. It was a very bad situation, it just went, boom, boom, boom, super fast, and there was nothing anybody could do fast enough. She wouldn't have made it to the hospital.

You know from the way it sounded, she didn't even realize, it must have just gone fast, and the whole thing was just a very tragic situation. And, what was really bad was that she was a friend of the midwife - Yes, it like to have destroyed her.

More typically, these lay-midwives found that they were routinely able to, and trained to identify the extraordinary and to get help accordingly. According to Karen: "After going on enough births, you feel it. I mean, it is in the air, you see it, you just know." Subsequently Karen told the following story to exemplify what she meant by "... you just know."

K: Well, here is one that anybody could have figured out. It was real simple. We have a 40 year old, grand multip woman; it is her sixth pregnancy. She's had a really uncomplicated pregnancy. She is doing really well. Her labors are generally very quick, like within an hour to two hours at the most. That is the reason she had chosen me, 'cause I'm down the street. She had never had

any complications, none, whatsoever. She is going to have a fairly good sized baby, but that's okay. She has had good sized babies in the past, I'm not worried about that. She is two weeks overdue, her husband is getting concerned; but all of a sudden she starts labor. I go over and check on her and she is piddling around, and there is no big deal. I'm going to go home and take a shower and I'll come back. Well nothing is complicated. There is no problem. I wouldn't have left if there was a problem. She called, and said the contractions were picking up; can you come back? So I go on back to her house and I walk in the door. She is 7 cm dilated. I have my assistant listen to the heartbeat. During the contraction the heartbeat drops to 30 or 40. Alright, we have a very stressed baby, for one reason or another. I don't know exactly why; obviously it is cord compression but where and why. We have a real high floating baby. I mean you can't feel this baby's head, she is so high. The head hasn't engaged. She is dilated 7-8 centimeters, there is no engagement, we can't tell the position of the baby because it is not down far enough. We get the heartbeat in one place only, which showed me that it is probably posterior. Okay, well that's okay. Posterior, she's big enough; she can have it. I'm not worried about that; but her waters are fixing to break; where is the cord? Is it already compressed and the water is going to break and cause the cord to wash out? I mean we're looking at several possibilities here. The baby's head is floating high, the heartbeat is dropping real low which indicates there is cord compression and is probably posterior from the way the heartbeat is being picked up.

...I think I was more concerned about when the water broke, a prolapse. She was not complete, with the bag of waters bulging tremendously. It was going to break. I was afraid I'd have a prolapse and not be able to get that baby out; and it would be dead within 5-8 minutes. You see, I'm looking at all these possibilities. She is 40 years old, a woman who is multip has a higher chance of prolapse. It is the statistics in the books, and she is fitting all this risk criteria. We're there in probably 7-10 minutes, and I'm calling 911. Come get this woman and let's take her out. Alright, we get her to the hospital. They mess around for an hour and a half, they're unable to determine position of the baby.

The doctor calls ahead and he says, 'well we have a real serious situation here. Get her ready for a C-section'. She delivered a

posterior faced presentation five minutes before he walked in the door. That was the problem, right there. Of course, if they couldn't see it, how was I going to see it?

When I first walked in the hospital, they kept telling me, just a cord compression, she's ready to deliver. And, I'm like, well, yes, that's a possibility. I did think of that, but what if? My gut just tells me something is not right; we've got a problem here; something is really wrong. It just doesn't feel right. And, when the baby was born, the waters did break and the baby came immediately after. They got no heartbeat whatsoever, immediately. The cord did wash out; the only thing she was complete at that time. They got this part of the face first, across the eyebrows around the nose, upside down. So, they're dealing with a really pretty serious problem here and no heartbeat on the baby when he delivers. Now do I want to deal with something like that at home? No way, Jose! Not unless I was caught with it. It did work out; but what if it hadn't because I had been foolish enough to ignore how I felt about that situation?

Most birth stories however, were those of exhausted but delighted mothers, fathers who had never experienced anything so wonderful, and of responsive, thriving infants. One of the most amusing stories was recalled by Melissa. Reportedly the husband was determined that his wife would have their child by squatting and delivering. She had no idea where or how he had gotten this idea but suspected he'd read on too many National Geographics or taken one too many Anthropology courses. He was so sure that that was the way to have a baby, that Melissa was a bit concerned about accepting them as clients. In her experience, a lot of preconceived notions about "the way it should be" were often a sign that there was another agenda besides having a baby, having a homebirth, or having the experience/rewards of natural childbirth. "For some reason, I accepted them anyway." Melissa recalled arriving at the home shortly after the

woman's labor had begun. She found the woman virtually "running in circles" around her home; her husband was following several paces behind; each were grunting and groaning as he pursued her. Melissa recalled watching, shaking her head wondering what she had agreed to, and deciding not to join the chase. Eventually, she called a temporary halt to the action so that she could determine the progress of the labor and the well being of the baby. Afterwards "the chase" resumed until the woman stopped, squatted and proceeded to push. Seconds later, Melissa was easing a well developed infant boy onto the floor. Once the placenta was delivered, and the cord was cut, mother and father reclined to enjoy their son. They were thoroughly pleased with themselves, their son, and their birth experience - "They wouldn't do it any other way". And, when Melissa recalled the story, she identified this couple as one of the happiest couples she attended.

Clients who have used lay-midwives, interviewed during this study, were generally satisfied with their midwife and care. In fact, one informant identified that it was after talking to some of the women that Karen had attended that she found the idea of a midwife attended homebirth really appealing, until that time it was more her husband's idea than hers. Rose, a 26 year old, elementary art teacher described her introduction to Karen and midwifery this way:

R: At first I thought, well, I wasn't sure because I didn't know anything about it and it was kinda - Well it's funny to think of having children at home now. You know, if you're going to have a baby, you go to the hospital but then I think...

J: You're not as committed to the idea?

R: Well, now I am but I wasn't as that time. I guess I'm not - I can't find the word - into challenges. I guess I'm afraid to start something new - so - But anyway, he (her husband, Roger) called about three midwives, then he had me call them. He told me the one he was most impressed with and so I called her and talked to her. Then, she (Karen) gave me some references - And, from there it got more and more appealing, because having a baby at home is much more personal and intimate. You know, it's not cold; the baby gets more attention and affection - And, so do I. They (Karen's references) recommended her highly and so we decided to go visit with her. At first, I still had doubts but I went ahead with it because I figured it couldn't be any worse than seeing a doctor - especially like the doctor who we had with Heather, he always seemed so paranoid.

The recent success of lay-midwifery is in part a reflection of their client's individual satisfaction with their particular birth experience. More than any other group of practitioners, lay-midwives have given concrete expression to the notion of natural childbirth and have enabled the elaboration of the social and psychological aspects of the experience. Accumulated statistics as well as a plethora of testimonials document not only the success but the safety of both lay-midwifery and homebirth. Poor outcomes are not only unusual, they are rarely attributable to a midwife being incompetent or unknowledgeable.

Safety of Homebirth

In the early 1980's the numbers of homebirths in Houston had become a significant enough of a phenomenon that the biomedical - obstetrical community was not only taking notice but openly and emphatically declaring the whole notion of homebirth categorically unsafe. A local health science center publication, Houtexan, in 1983,

reported a study conducted by five physicians/obstetricians. As reported the primary investigation concluded that "... homebirth is 'a serious and possibly dangerous endeavor.'" (Griffin, Oct, 1983, p.7). This conclusion, however was not based on a study of women who had had a homebirth but of 390 patients who had planned to use the hospital birthing suite. Only 41% (160) of these women actually gave birth there; the other 230 patients delivered in conventional labor/delivery rooms. The typical reasons cited included late term pregnancy complications such as hypertension, premature labor, premature rupture of membranes, fetal distress, medical complications; but other reasons also cited were inability to cope with the stress of labor, the birthing room was in use, and "... because of the anxiety of the resident or attending physician" (p.7). The following year, two more university professor obstetricians were quoted in an article published in Houston City Magazine. Again their unqualified perception of homebirth was that it was unsafe, as one put it:

"Childbirth is natural, but also is dying. In the 1800's, over a third of mothers died in child-birth. I love fathers in the delivery room, and, of course, the fewer drugs the better. I'm all for certified nurse midwives, too, but homebirth stinks." (Houston City Magazine, November, 1984, p. 104)

In the same article, another obstetrician expressed concern about the unanticipated, unexpected disaster. She thought that the nurse midwives who were doing home births were at best naive. In this obstetrician's words:

"Even with her careful screening, there is a risk for mothers, and especially the child, when births are performed out-of-hospital. Maybe, it's a 1 in 10,000 risk of

needing a three-minute C-section. It may never happen, but it could happen on the next baby. The idea of working nine months on a baby and losing it at home...I couldn't live with myself." (Ibid.)

Although there are limited statistics about the numbers of complications and seriousness of complications, my lay-midwife informants gave quite another picture of its safety and their ability to identify and manage complications. In the early 1980's Melissa and her partner Barbara reported over 150 homebirths, never losing a mother or an infant. Mickey, one of the first lay-midwives in Houston, stated that she had attended over 300 births without an unfortunate outcome. Karen, who started practicing in the early 1980's acknowledged by 1989, one infant death which subsequently was attributed to a congenital heart deformity.

Their apparent success was not an accident; each of these lay-midwives were very selective in the women and families they accepted as clients. Although each midwife's criteria varied, there was general agreement that homebirth was not for everybody and that women who would not or could not take care of themselves were poor candidates for homebirth. Taking care of themselves was typically defined in terms of not smoking, abstaining from alcoholic beverages, no current or prior use of street drugs, even marijuana, willingness to receive regular prenatal care, and to arrange for hospital and medical care in the event that the pregnancy or labor became complicated. And, although it rarely happened, each of these midwives would insist that a client find another birth attendant because the pregnancy was no longer within their definition of normal or the client's behavior was no longer safe. Melissa, for instance, insisted that her clients eat a

balanced diet, foods from the four food groups (dairy, meat, vegetables, grains). She was very insistent that junk food, particularly refined sugar be eliminated from the diet, "... that eliminates 90% of the hypertension. The salt is necessary and should not be restricted, but hypertension occurs when a woman eats a lot of sugar and a lot of salt." Karen, in contrast, is more liberal. While she expects her clients to "...eat healthy foods", she does not categorically object to junk food. This more liberal attitude has evolved over time with experience.

K: Well, for one thing, you know, I did learn this from one lady. Up until three or four years ago I just kept trying to impress upon them, okay you have to change your eating habits. You are eating too much junk food; you need to change and eat the good foods. Well this one midwife came up with a real good plan I've tried ever since. And, it works really well. "No, I am not going to stop making you eat junk food, but you have to promise me something. Before you have that candy bar, before you have that cake, or at least when you sit down with that cake, you sit down and you have a piece of fruit. You have a piece of whole grain bread. I mean you eat something from each of the food groups; then if you have room for that candy bar, go right ahead, have that candy bar. You fulfill what you have to; go ahead; eat what you want..." That has worked a lot better than trying to completely change their habits and I have also seen a lot less trouble.

There was no way to verify the fortunate outcomes that these three lay-midwives have described but their outcomes, their perception of planned homebirths as safe and of women and couples seeking homebirth as usually very responsible were consistent with the studies of planned homebirths reported in the national press and various professional journals. In 1974, a study of 300 elective homebirths from 1969 to 1973 in the San

Francisco Bay Area showed no maternal deaths or infections and only one intrapartum fetal death (Hazell, 1975). Significantly, the majority of births were attended by the father or a friend of the couple. Only 10% of births were attended by lay-midwives, another 10% were attended by physicians and the one intrapartum death attributed to an occult prolapsed cord was attended by a physician. There were two maternal complications, one incident of newborn pneumonia, four breach deliveries, one set of twins, and two incidences of congenital abnormalities. In 1977, Mehl and his colleagues published a summary of outcomes of 1,146 elective home births in Northern California. The births occurred between 1970 and 1975 and they were attended by family physicians, registered nurses (who were experienced maternity nurses, but not C.N.M.s) and by lay-midwives. Again rates of medical complications were low; there were no maternal deaths and the perinatal morbidity and mortality were lower than California averages for the same period. While there were eleven perinatal deaths, 5 fetal and 6 neonatal, only two of the fetal deaths occurred during labor and five of the six neonatal deaths were directly associated with congenital abnormalities. None of the neonatal deaths were directly associated complications of birth (Mehl, Peterson, Whett, Hawes, 1977).

Three years later Mehl, et. al. (1980) critically examined the practice of a group of lay-midwives by comparing their outcomes with those of hospital based physicians. An effort was made to equate populations on major medical risk factors. Initial analysis of the data of 502 matched homebirths and planned hospital births revealed that the midwife sample, including those transferred to the hospital because of complication had

significantly less incidents of fetal distress, post partum hemorrhage, and birth injuries. The lay-midwives Apgar scores at one and five minutes were also higher. Further analysis suggested that low risk patients seem to do best with less interventionistic practitioners, and that the more favorable outcomes of their sample of lay-midwives was due to their less interventionistic philosophy of patient management (Mehl, Ramiel, Leininger, Hoff, Krenenthal, Peterson, 1980, p.27).

By 1982, claims commonly made by ACOG intended to convince women that a physician attended, hospital birth was the only safe way to birth a baby were increasingly called into question. Statements such as "home delivery is maternal trauma and child abuse" or "out-of-hospital births pose a 2 to 5 times greater risk to a baby's life than a hospital births" were not intended to inform individual's decisions but to control their behavior (Gordon, 1982, p.35). Health department's vital statistics at that time did not routinely differentiate between planned and unplanned out-of-hospital births. As a result, there is no way to determine from the statistics themselves the relative safety of midwife attended homebirths. An initial study in North Carolina demonstrated that only 72% of out-of-the-hospital deliveries (1974 - 1976) were planned homebirths. Once neonatal mortality was calculated separately for planned and unplanned homebirths, the differences in outcomes were striking. The neonatal mortality rate for planned home deliveries were 6 per 1000 live births, which compares more than favorably with a mortality rate of 120 per 1000 for the unplanned home deliveries (Burnett, Jones, Rooks, et. al., 1980).

A similar analysis of out-of-the-hospital births in the births of Kentucky, 1981 - 1983, demonstrated similar results in outcomes (Hinds, Bergeisen, Allen, 1985). Of the 575 planned out-of-the-hospital births, 265 were reportedly attended by a physician and/or nurse (some of which were C.N.M.'s); 214 were attended by lay-midwives; and 96 were attended by a relative or friend. They found that the incidence of low birth weight, a factor closely associated with poor neonatal outcomes/deaths, was only about half of the expected number of incidences for those who had planned out-of-the-hospital births. There were no neonatal deaths among the 465 planned homebirths; the two neonatal deaths that did occur in this cadre of women who planned out-of-the-hospital births were among the 62 births in a physician's clinic. One of these deaths was attributed to sudden infant death; the other was premature, a 482 gm infant. According to these investigators, unplanned out-of-the-hospital births during this period were more likely to occur among the socially and economically disadvantaged, young (< 18), non-white, single, unemployed, and less than a high school education. In the end, they concluded that "...poor birth outcome in this group may well relate to the lack of prenatal care rather than out-of-the-hospital birth per se." (Hinds et. al., 1985, p.1582) All but four of the 19 neonatal deaths which occurred among the 234 women who experienced unplanned homebirths were associated with prematurity/low birth weight (< 1500gm).

More recently Durand (1992) attempted to determine the relative safety of homebirth by comparing the outcomes of a cohort of 1707 planned lay-midwife attended homebirths from the Farm Midwifery Services in Tennessee with the outcomes of a

sample of physician attended hospital births. The physician attended hospital births were drawn from the 1980 U.S. National Natality/National Fetal Mortality Survey and controlled for effects of birth weight, type of delivery attendant, and demographic characteristics of the mother. Despite the fact that the study, like those reported previously, was retrospective and that the intended site of delivery was considered the only significant independent variable, this investigation found no significant differences between the two groups in terms of fetal and neonatal deaths, complications associated with labor, low Apgar scores. The Farm group of lay-midwives, however, had a significantly lower incidence of assisted (2.11% vs 26.60%) and C-section (1.46% vs 16.46%) deliveries. In the end, Durand (1992) concluded that "...for relatively low-risk pregnancies, homebirth with attendance by midwives is not necessarily less safe than conventional (hospital-physician) delivery..." and that "Support by the medical and legal communities for those electing, and those attending should not be withheld on the grounds that this option is inherently unsafe."(p.452)

Cultural Context of Lay-Midwifery

The contemporary lay-midwife, despite some interesting and significant parallels in their perception of birth and their reliance on non-intrusive techniques, is a modern phenomenon; and not as some have suggested, simply a new type of "granny" or a sign that America's cultural clock is running in reverse. Lay-Midwifery is a modern phenomenon and like biomedicine, it is rooted in the mechanistic world view, the

rationalization of the body and of everyday life, and in the acceptance of functional relationships elaborated in industrial, urban society. Differences between obstetrics and lay-midwifery are more often a matter of degree and of interpretation than of kind. Lay-midwifery evolved from women's dissatisfactions with obstetrics and medicalized birth and is simultaneously a contemporary critique of modern life and medicine, a symbolic manifestation of the cultural conflicts and social tensions which underlie the fragmentation of America's middle class, cultural hegemony (Lears, 1981; Gusfield, 1963), and a concrete, pragmatic response to the perceived needs of various groups of middle class and in some cases lower class women that physicians would not and nurse-midwives could not meet (Ventre, 1978; Davis, 1981; Gaskin, 1978).

Significantly lay-midwives are interested in establishing cooperative professional relationships with physicians and hospitals. The lay-midwives I spoke with in the course of this study were not categorically opposed to obstetricians or obstetrical practices, even C-section and fetal monitoring. Each of these three informants cited two or three examples of deciding to transport a woman, because in their judgement the pregnancy or labor was no longer normal. Moreover, these midwives were careful about who they accepted as clients. According to Karen, "... some women are just not safe." In those instances, there was no reluctance on the part of the midwife to refer the woman to a physician. The lay-midwives motivations were not simply a matter of protecting their reputations and practices, a serious consideration since as the following story graphically demonstrates, unfortunate outcomes provide opportunities for biomedicine to assert its

moral and medical superiority. But, as Karen's recollections of her one infant loss exemplified, in this lay-midwife's judgement unsafe behaviors and life styles such as drug use in this case were typically associated with complications which required medical treatment and management not only for a current but for subsequent pregnancies.

K: I wasn't mad at them. I felt so sorry for them, because I really and truly felt they didn't know what they were doing. I really don't think they did, I still don't think they did. They had two children after that, one baby within a year, and then the next baby was born fine, healthy. I wouldn't deliver the baby because it was something they said could happen again. (According to Karen the autopsy report indicated that their first child had died because of congenital abnormalities of the heart, problems which were known to be caused by a virus infection and drugs. Two weeks after the loss of their son, the father reportedly asked Karen if "...could it have had anything to do with the drugs we did...?")

I sent her to this doctor 'that loved me so dearly'. (Reportedly this physician had attempted to have Karen arrested for murder when the infant had died.) He got so mad about it. I told him, 'The reason I sent her to you is because you are the best physician in town. You are the only gynecologist that I know and she needs a good doctor. And, I sent her to you because I thought you would be the best for her to see.' He did an excellent job. He took really good care of her, and she did have another baby within a year. The baby was put on a monitor because of a heart problem and stayed on it for a year. The baby survived. A couple of years later she had another baby and was born perfectly healthy. I assumed that what happened was the drugs were finally out of her system enough after that many years. She was able to have a baby with no problems.

Reforming Medicalized Birth

It appears that the freedom of lay-midwives to emphasize the spiritual/psychological and the familial aspects of childbirth depends largely on their distinction between normal and abnormal or complicated childbirth. Unlike the physician obstetrician, midwives perceive adult women as being capable of carrying a child and essentially trust the woman, physically and mentally, as strong enough to accomplish the work of labor and birth her child. Typically lay-midwives and their advocates argue that when complications occur they are most often minor, treatable in a low-tech environment and that the modern perception of childbirth as a risky, precarious event is, in fact, a reality exaggerated by the consequences of meddling midwifery in the nineteenth century and institutionalized by the pathological orientation of twentieth century obstetrics. In this context, the joy of participating in the experience and the benefits of spontaneous mother-infant-family bonding which consumers found so desirable and satisfying were not so much objective goals but serendipitous consequences of 'natural childbirth'. Not unlike Rousseau's natural child, good births are things that happen when natural processes are facilitated rather than managed (by culture). This classic nature - culture opposition was evident in the introduction of an instructional manual which characterized the purpose of the midwife as being "...there to help mothers and babies do what God and nature meant for them to do for themselves." (Stewart, 1981, p.vi) Karen echoed the same tension when she contrasted the obstetric and nurse-midwifery approaches to practice with her approach as a lay-midwife: "...nurse-midwives and

doctors, at least from my experience at dealing with them, they go at it looking for something... They are going in and they are looking for something to be wrong rather than okay everything is going fine, and waiting for something to happen. I'm trained to see if something is out of the ordinary and get help accordingly."

TABLE 4.3

**Characteristic Practices of Three Contemporary
Houston Lay-Midwives**

Advocate personal habits and practices which are expected to enhance the health of the mother and her baby thereby avoiding complications such as pre-eclampsia, preterm labor/prematurity, and low birth weight.

- a. high protein diet
- b. avoidance of alcohol and tobacco
- c. no dieting and food from the 4 major food groups each day
- d. no salt (sodium) restriction but limited intake of refined carbohydrates, especially sugar.

Advocate childbirth preparation as both a means of empowering women and their partners to make informed choices and take personal responsibility for their pregnancy and birth.

- a. childbirth education classes given by the midwife and/or her apprentice
- b. extensive prenatal care including physical pelvic examination, laboratory work, and leisurely (30 - 60 min) discussions about the process of pregnancy, specific instructions on diet, exercise, sex, the woman's response to and concern about herself and her

pregnancy, and discussion of specific birth plans and preparations of having a homebirth.

- c. involvement of spouse, children, and selected others in the birth experience
- d. alternative or back-up plan in the case that the pregnancy ceases to be normal or serious abnormalities arise during labor - this includes arrangements for ambulance service, physician coverage, and hospital admission.

Advocate a supportive attitude and non-technological interventions in the labor process.

- a. use of the fetal scope and more recently a dopler to monitor the fetal heart rate
- b. encourage the mother to eat and drink fluids throughout labor
- c. use of walking, nipple stimulation, sexual foreplay with the partner to strengthen contractions
- d. perform a minimal number of vaginal exams to assess the progression of labor and increased reliance on characteristic vocalizations and behavior changes
- e. use of massage, oil and support to the perineum to avoid or minimize the event of tearing (an episiotomy is not performed)
- f. encourage the position of comfort including the taking of baths and showers and frequent movement and change of position right up to the moment of delivery, position for delivery varies with the woman, but positions which take advantage of gravity are often encouraged
- g. perceives birth in the woman's home as a clean, rather than a sterile procedure, sterile equipment routinely used for vaginal exams, cutting the cord, injections, sterile gloves are frequent but not always used for catching the baby
- h. sectioning and stroking of the infant takes place at the time of birth, in the event that respirations are not spontaneous, oxygen is administered and/or mouth to mouth resuscitation

The midwife respects the birth plan or preferences of the mother and her partner, and considers it an honor to be present at the birth of a child.

- a. encourages and supports the husband or partner's efforts to be an important part of the birth experience - i.e., enables his actually catching the baby, cutting the cord, talks him through the role of labor coach, gives him "important" things to do if he needs a rest or time to compose himself.
- b. picture taking or videoing the birth is facilitated
- c. siblings are generally welcome at the birth and encouraged to touch or hold their new brother or sister shortly after birth. Melissa stated she often asks the woman/couple to have another adult present to attend to the needs of other children
- d. customs of other cultural groups are respected, disagreements about what constitutes necessary/appropriate care are negotiated to the satisfaction of midwife and client. In the event that differences cannot be negotiated satisfactorily, clients are directed to alternative providers.

Immediate mother-infant-family bonding is encouraged by the midwife.

- a. all present at the birth are encouraged to touch, stroke the newborn
- b. mother is encouraged to touch the infants head as he/she begins to crown
- c. immediately after birth the infant is lain on the mother's abdomen until the cord stops pulsating and is then cut.
- d. once the cord is cut the mother is encouraged to put the infant to her breast
- e. once the placenta is delivered and the mother is comfortable, mother, infant, and her partner are encouraged to spend some time together (often in the parents bedroom) getting reacquainted and acquainted with their infant

Perceiving and Handling Complications

When extraordinary complications occurred or if they appeared to be occurring, lay-midwives were very clear about changing their categorization of the pregnancy or labor form normal to abnormal. And, once judged to be abnormal, the lay-midwives'

manner of talking about; mode of thinking about the woman they cared for changed. Notably their mode of thought became increasingly analytical, their definition of the problem(s) increasingly medical, and their approach to the patient more physician-like. The approach that physiological emergencies must be dealt with physically is the approach advocated by published manuals for lay-midwives (Gaskin, 1978; Davis, 1981). The processes recommended for dealing with problems from prenatal anemia, preeclampsia, hypertension or fetal distress were without exception logical and consistent with conventional biomedical categories of the diseases of pregnancy. And, although these manuals typically suggest interventions not commonly found in biomedical texts, these differences often reflect knowledge of and experiences with different types of interventions rather than an alternative medical theory. In this context transferring a woman to the hospital or referring her to a medical back up were interventions lay-midwives typically utilized when abnormalities required care that they were unable to provide (i.e., IV fluids, suturing, fetal monitoring, surgical intervention) or if a clients physical problems were too severe or non-responsive to the therapeutic interventions of the midwife. Consider, for example, the explanation Karen gave for the event of and proposed treatment for preeclampsia, a syndrome unique to pregnant women. While her explanation was not one commonly found in contemporary medical texts or journals, the structure of the explanation was remarkably similar in that it embodies the biomedical concept of disease - a specific pathological entity with its own etiology, symptoms, course, and outcome (Shontz, 1975). Moreover, once a problem or disease was

identified, her focus was no longer the individual so much as it was the type of illness/disease. Curative devices were physiological and were directed toward the predictable but impersonal "disease". Implicit in her approach was the expectation that unless something (treatment) was done to stop it, the preeclampsia would run its course endangering the well being of both mother and her child. In the way she described her approach, particularly the authority conveyed in her voice, it was also evident that she expected the woman to comply with her recommendations/treatment. Hence, the biomedical conception of man as a machine, disease as a kind of organ or mechanical failure, and practitioner as an engineer devoted to discovering the means by which the course of the disease could be disrupted or prevented from occurring remained intact and unchallenged.

K: Preeclampsia in most cases is due to lack of nutrition. It happens sometimes because of other problems but more than likely it is from that. Probably in 8 years, I have seen it three times and two times we were able to bring it under control with diet.

It is a very strict program. I mean the minute you start noticing increasing blood pressure, protein in the urine, edema, you increase the protein from 75 to 80 grams to 125 grams a day. They take a walk twice a day; then, they come and they rest 15 minutes. They increase the calcium intake to about 2000mg a day. They increase their water to a gallon a day. They take B-complex three times a day. All of these things to help the body fight the stress, the water to help clean the kidneys out, flush their system, the protein... you increase the protein because they are not getting enough. The body is not healing well, they need something to fight with, the calcium helps the body heal too. Then when the blood pressure starts to go up... There is a whole recipe that I go through, okay - This morning you need to eat at least so many grams of protein. Alright, after breakfast you can go take a 15 minute walk. If the blood pressure is elevated they lay on their left side for 20 minutes when they come back.

Cognitive Structure of Lay-Midwifery

The abstract approach, inherent in Western science's mission to discover laws and to formulate ideal types, had set the stage for the ascendancy of a static, objective, abstract medical theory congruent with the precepts of Newtonian physics (Jaynes, 1976; Capra, 1982; Shontz, 1975). Since the end of the nineteenth century, the rational models and methods of science were generalized and extended to the explanations of organic phenomena, to the organization and the conduct of everyday life. And, in time they were incorporated into the common perceptions as well as the medical scientists' esoteric conceptualizations of the body and its processes (Larkin, 1988; Geertz, 1982, Haller and Haller, 1974). Technological innovation and professional expertise became the answer to the problems of everyday life and to the ailments of the body.

The broad social acceptance of the mechanistic world view and the Naturwissenschaft paradigm (Jaynes, 1976, p.387) was an integral aspect of the ascendancy of biomedicine (allopathic medicine) and of the evolution of and acceptance of modern obstetrics. The body as machine not only placed the emphasis on life's materialistic entities, it allowed biology to develop a preoccupation with physiological and pathological mechanisms, and encouraged a medical theory concerned with a closed system of structure, function, and inner homeostatic balance.

The specific localization of the site of pathology within the body and its subsequent treatment are central to the biomedical value system. Heir to the body/mind dichotomy and to the split between the individual organism and the world, biomedicine explicitly conceptualizes disease, its cause, and its treatment in terms of the basic sciences. (Stein, 1990, p.39)

As medical theory was being reconfigured to conform with the categories and precepts of science, and medical practice was incorporating the skills and instruments of technology, the organization of medical roles and specialties was reconfiguring itself according to the new theory of complementarity (Shiebinger, 1989). Old divisions of medical practice which were based on categories such as "ordinary" and "extraordinary" or on the criteria of class were replaced by divisions based first on gender and then on instrumental skills. Subsequently, women were systematically excluded from the medical roles most closely associated with male attributes and curing, and relegated to roles deemed more appropriate to their inherent female qualities, namely caring. In this new system of complementary dichotomous relationships, the midwife no longer fit; her "curing" activities and knowledge put her in direct competition with the doctor-obstetrician. It was the new role of the trained nurse which evolved to complement that of the male physician; it was the nurse who, like the wife/mother, was responsible for the domestic chores of the hospital environment and for identifying and satisfying the emotional needs of physicians as well as patients (Linn, 1975; Mayo, 1976; Tomes, 1974; Bates and Kern, 1967).

Today the practice of lay or independent midwifery is radical in that it so completely rejects the biomedical community's disease models of pregnancy and childbirth and their heroic technologically-oriented approach to managing the event. Despite the obvious differences between obstetricians and middle-class lay midwives, it can be argued that lay midwifery remains primarily a reform movement and that the

differences in these practitioners' approach to childbirth are first order (Bateson, 1972) or surface (Gertz, 1983) changes rather than deep or fundamental changes in the intellectual structures which support the logic and reasonableness of both biomedicine and medicalized birth. Specifically, lay midwifery does not challenge fundamental biomedical perspectives so much as it steps outside of it. They have essentially made an authoritative declaration that uncomplicated pregnancy and childbirth are not diseases and therefore do not qualify as medical problems nor do they require medical intervention.

At the point that childbirth does become complicated, the scientific rationality, therapeutic goals and clinical decisionmaking of these lay midwives was more or less in keeping with the mechanistic worldview and the *Naturwissenschaft* paradigm of modern obstetrics (Oakley, 1984; Wertz and Wertz, 1989; Magner, 1990; Ulrich, 1990). Lay midwives relied on the same materialistic models of the body and on rational cause and effect explanations of disease and dysfunction in their arguments that good nutrition and prenatal monitoring were the first line of defense against a pregnancy becoming problematic. Moreover, their use of physical examinations, laboratory studies and asepsis, as well as their explanations of problems strongly suggested that their approach to diagnosis (definition) and treatment were, if not always in content, structurally similar to those of physicians' biological models.

Moreover, the contemporary practice of lay midwifery does not challenge the patriarchy which pervades the allocation of roles and responsibilities within the

institutions and organizations of biomedicine. Again, by stepping outside the system, lay midwives have avoided having to directly confront many of the institutionalized divisions between male and female medical practitioners and between performing cures (delivering babies) and providing care such as monitoring and encouraging a woman in labor.

However, the common argument that childbirth is by its very essence women's business and that being a woman was a necessary qualification for attending the parturant, typically used to legitimize the emergence and practice of lay midwifery, is reminiscent of traditional midwives' protests 200 years ago against the man-midwife's intrusion into women's birthing rooms and the conduct of "ordinary" childbirth. Notably, it was also this argument, although inverted, that was effectively used to disqualify women as qualified birth attendants (Donnison, 1977; Ulrich, 1990; Schiebinger, 1989).

In this respect, although the lay midwife's attitude towards and management of childbirth seems radical and revolutionary when juxtaposed to the attitudes and practices of the modern obstetrician, the practice of lay midwifery is better characterized as neotraditional. Consciously or unconsciously, lay midwifery appears to have reconstructed the dualistic gender roles of colonial America, thereby adopting a model which both preceeded and evolved into the complementary dichotomized gender roles of modernity. Like Martha Ballard's practice described in chapter one, lay midwives manage "ordinary" or "normal" childbirths, effectively treat "minor" complications; and practice with other women in the private domestic realm of the home or home-like setting

of a birthing center. Lay midwives call in the physician to manage complications, which they then do in the public realm of the hospital.

In fact, once the prohibitions on physicians providing medical back-up to lay-midwives and for their clients lessened, the differences were more often a matter of degree or of particular practitioners' interpretations of particular legal definitions of medical practice. Individual lay-midwives often sought medical back-ups and formed respectful, professional relationships with them. Conflicts between lay-midwives appeared to have an impersonal quality, and typically involved political and professional agendas such as the maintenance of professional boundaries and reaffirming biomedicine's prerogative to incorporate all types of medical practitioners and physicians' right to subordinate and supervise all other medical practitioners.

Chapter V

Deconstructive Modernity: The Ideology and Practice of the Nurse-Midwife - A Postmodern Critique

The past is the myth modernism invented as the story of its origin and as the justification for the future overcoming that origin. If it is the irony of creation-in-destruction, of utopia rising from the detritus of the plundered past, and it is the source of the nostalgia for the whole sundered by desire for that future. This is the fundamental irony of all that is modern --- of the future that legitimizes the dismemberment of the past and of the past the future ends. It is the story of necessity for loss and alienation and of the necessary longing for the lost and alienated (Tyler, 1987; p.3).

The Pluralization of the U.S. Medical System - A Reprise

The contemporary pluralization of the U.S. medical system, unlike the pluralization of the medical systems of folk and traditional societies, cannot be attributed to the introduction of the mechanistic world view, the industrialization of its economy, the professionalization of the occupations, or the introduction of biomedicine and its obstetrical system for birth into society's medical market place. In fact, quite the opposite is happening. And, the pluralization of the U.S. medical system is both a cause and an

effect of rethinking the mechanistic world view, of the evolution of an ecological perspective which supports an ethic of preservation and co-operation, and a decline in the ideology and institutions of patriarchy which have underwritten this society's characteristic patterns of domination and subordination (Capra, 1982; Ruether, 1992; Schiebinger, 1989).

The social discourse about modernity has been pushed to an extreme; difference have been magnified and accentuated. The complementary schisomegenic patterns of communication (Bateson, 1972) between groups and individuals has progressed to the point that groups are increasingly polarized; even close personal relationships are competitive and antagonistic. The reality of alienation and nihilism exemplify the dark side of capitalism, industrial development, and technological progress.

The productivity of the modern endeavor is diminishing; the appearance of change and progress (style) is increasingly substituted for innovation. Conceptually, as well as practically, the categorical oppositions which have defined modern and traditional (see Table 2.3) are breaking down. And, the Protestant ideals of purity of form, and functional efficiency are beginning to evoke the dullness, perversity, and death (Jencks, 1968).

Another Reality: The Impact of the New Sciences

We live in a dynamic, changing Universe. It was born, and it will die. Everything within the Universe, including the Sun and the stars, has its own life cycle. Nothing is eternal (Gibbin, 1993, p.3).

The Big Bang

Man's concept of the Universe and his place in it are again changing. In the early 1920's, astronomers, with the aid of new telescopes, began to discover that the Universe stretched far beyond our own Milky Way galaxy. By 1929, Hubble had discovered how to measure distances in this new expanded universe; in the process, he discovered that the entire universe was expanding. Implicit in this discovery were the notions that at one time the Universe was born in a superdense fireball, the Big Bang, and in some time in the very distant future the universe will collapse to a black hole (Gribben, 1993). In the meantime, however, there appear to be many smaller cycles of birth and death within the larger Universe; the collapse of a black hole can result in a bounce which creates, gives birth to, a new universe with somewhat different characteristics (physics) than those of its parent universe (Hawkins, 1988; Gribben, 1993). Einstein's uncorrected general theory of relativity, in fact, provides a very good description of how this new concept of the universe works.

And, while the complications of this new cosmology are yet to be fully comprehended it can be said that the old notion of an unchanging and eternal world which was critical of the formulation and elaboration of the mechanistic world view, has

like Ptolemy Cosmos centuries ago, has been found to have no basis in empirical reality.

The universe is again being represented as an organism which continues to develop and change over time rather than as an incredible machine which was designed, constructed, and placed into motion by the divine of the unmoved mover. In fact, the Big Bang account of creation, while it clearly allows of the influence of a divine presence, it virtually precludes the omnipotent personal deity of either orthodox Protestantism or Newtonian science.

Quantum Physics

The laws of nature appear to have crumbled in view of this new cosmology and under the weight of the findings from quantum physics and mechanics. It was in the subatomic realm where Newton's physical laws were expected to finally be verified, and the many qualifications and exceptions overcome. There, scientific theory and the material reality were expected to become one. However, in the realm of subatomic particles, the expectation of one-to-one correspondences between the ordinary world of observable measurable phenomena (reality) and the intangible world of particles (quantum stuff and theory) dissolved, as did the separation between the observed and the observer (Herbert, 1985; Zukov, 1979; Jones, 1979; Capra, 1975; Prigogine and Stengers, 1984). In the subatomic realms, the observers, and therefore consciousness (mind) becomes an integral part of scientific observation - knowing and experiencing subjective phenomena. Specific events can only be predicted in terms of their relative probability; objects ceased to exist and with them the qualities of universality and certainty. The idea

of disorder or chaos has been replaced with the idea of different degrees of order and order out of chaos; and the idea of a universe composed of building blocks, atoms and molecular building blocks (separate, distinct, interacting parts) has been replaced by the notion of a universe which must be regarded as an undivided and indivisible whole (Herbert, 1985; Capra, 1975; Jones, 1979; Prigogine and Stengers, 1984). Structures, or more aptly structuration, are not predetermined or predestined objective entities; rather they emerge when measure or boundary are combined with order, creating "... a 'harmoniously organized totality' of hierarchical levels working together..." (Bohm, 1980, in Tyler, 1987, p.27).

A New World View

As an organizing principle, structuration gives prospect of a world of infinite possibilities (Gould, 1989) which cannot be known by the classical scientific methodologies of analysis or analysis-by-synthesis (Tyler, 1989). In such a world / world view, difference, rather than the eradication of difference through abstraction constitutes a means for ordering the world which is radically unlike the classical mode of division and of dichotimization. Whereas oppositions (male-female, subject-object, mind-matter, chaos-law, feeling-reason) were directed toward a cosmic unity expressed in terms of an all-encompassing law, differences do not imply the necessity of hard and fast divisions in nature, in mind, or in the relationship(s) between mind and nature or between male and female (Keller, 1985). Rather than severing connection(s) and imposing distance, the recognition of difference provides a starting point for relatedness, a clue to new

unrealized or unrecognized connections or modes of connectedness. Perceptions and interpretations are now more complex; reality is no longer something 'out there' to be apprehended. Rather, reality always, corresponds to its active intellectual construction. In other words, we, at least in part, we co-create the realities we experience (Jones, 1979; Capra, 1975; Prigogine and Stengers, 1984)

Deconstructing Modernity: A Preliminary Step to Elaborating and Institutionalizing a Post-Modern World View

This new view or understanding of the universe, which is began to take shape early in the twentieth century, is now beginning to influence how we view ourselves, the microcosms of the body politic and of the human body. Mechanistic models and metaphors held together by natural law had been the bedrock for both Enlightenment philosophy and scientific (bio-medicine) medical theory. By knowing the regularities of God's universe, man like God, could construct the perfect world. By adhering to these "natural laws", the problems of social disorder and disease could be solved. Now, the very notion of a fixed set of natural laws has been called into question. It appears vital that God, in fact, does roll dice (probability vs. certainty), thereby calling into question the whole agenda of the Enlightenment.

The Newtonian synthesis has gone the way of St. Thomas Aquinas' synthesis; "... we are moving away from this rather naive assumption of a direct connection between our description of the world and the world itself" (Prigogine and Stengers, 1982, p.54-55). A science based on difference, in fact, captures the mood of the post-modern world.

It moves back to experience, to reintegrate man in nature, the self in society, and the mind in the body (Tyler, 1987). It moves away from the devouring totalities of abstraction and obsession with the growth of knowledge. In the world of difference, division is relinquished without generating chaos; male and female, self and other, mind and nature survive, not in mutual alienation or symbiotic fusion, but, in structural integrity (Keller, 1985). The same thing that ‘does not fit in’ no longer serves to prove the rule but to evoke a search for an alternative pattern of connectedness - a larger system of order.

The Post-Modern Critique

The notion of the Post-Modern was initially used to designate significant changes in the styles and purpose of Western architecture. Today, the term is used by scholars in philosophy, science, art, anthropology, art, literature, science, and history both to mark what they believe is the end of Modernity and the modern era and to articulate a critique not only of the exhausted aesthetics and declining institutions of modernism, but of the ideological assumptions which underlie them. Although there is no single definition of what constitutes either post-modernism or the post-modern, the notion of post-modernism provides a new framework for asking broad questions about the epistemology, history, and philosophy of science and about hermeneutics which assumed that understanding (knowledge) came exclusively from analysis, breaking things down into their basic parts, and from synthesis, the reassembling of parts into total systems.

The very notion of post modernism suggests a negation of the old and institutionalized past which must effectively be torn down and demystified before a new “reconstructive” treatment can be effected. The construction has emanated from the endogenous growth of knowledge, and it is necessary if a new institutional framework and a new type of cognitive structure (consciousness) are to emerge (Habermas, 1976). Therefore, deconstruction, whether and instance of post-structuralism or post-modernism, is a necessary process to the creation of the concept of a "post-modern era" and to the perception of postmodernisms (Jencks, 1986). It involves not simply an analysis of a particular structure or institution but an exploration of the ways in which our culturally available narratives, metaphors, and images are used to structure our notions of ourselves in the past, the present, and in our projections of our future (Culler, 1982). By-in-large, postmodernism has been a type of deconstructive analysis which denaturalizes some of the dominant features of our way of life by making conscious the fact that entities such as capitalism, patriarchy, liberal humanism, which are often experienced as "natural" are, in fact, created by us, not given to us as our religious traditions would suggest, or discovered by us as our scientific tradition describes.

Significantly, the post-modern critique does not seem to reject ideas and forms of the modern industrial society, nor does it seek to define itself simply as other than modern. Rather, it works to denaturalize or to "de-toxify" our cultural representations and their undeniable political importance (Hutcheon, 1989). This is accomplished by revealing the hidden agendas, the unjustified assumptions, and the pre-existing complexities which have been imbedded in the culture's fundamental premises and metaphysical schemes.

Deconstructions are typically accomplished by re-representing the past, by demonstrating that a particular discourse is in fact undermined by the philosophy it asserts or the hierarchical genealogy of a philosophy's concepts in such a way as to reveal a perspective that it cannot describe, or by reversing the conventional hierarchy so that it becomes evident that the accepted oppositions are more apparent than real (Culler, 1982; Calumeseu, 1987).

Post-modernism's relation to the master narratives of late capitalism and patriarchy, amongst others, is paradoxical. According to Hutcheon (1989), the postmodern does not deny its inevitable implications in the culture's master narratives, rather it utilizes the "insider" position to de-toxify or naturalize the "givens" and the things that "go without saying." Although the instability and uncertainty of the times also enables the agendas of the neotraditionalist and the neoconservative to emerge, the post-modern requires a theoretical sophistication and a historical memory that differentiates it from both. It is unavoidably complex and it knows it; like the word itself, the post-modern endeavor is hyphenated and double coded (Culler, 1982, Tyler, 1987; Hutcheon, 1989). In fact, its distinctive character lies in its commitment to doubleness or duplicity which comes from the struggle to integrate what has gone before with the present.

The Nurse-Midwife: Biomedicine's Solution to a Problem

Ironically, just as many obstetricians were advocating the elimination of the traditional midwife, other physicians were proposing the creation of a new biomedical practitioner, the nurse-midwife. In fact, this new type of midwife became a solution to

both the midwife problem and the lack of physicians willing to practice in remote geographical areas and among poor women who were unable to pay the physicians' fees (Wertz and Wertz, 1989; Goodman, 1921; Rooks and Fischman, 1980; Litoff, 1978).

Unlike the traditional midwife, the nurse-midwife's origins were in the new profession of nursing rather than in the community women's networks. A registered nurse who completed an additional educational program in the practice of midwifery, the nurse-midwife was prepared to manage the health needs of essentially normal women and their babies during pregnancy, childbirth, and the post partum/post natal period (Rooks and Fischman, 1990; Mulligan, 1976; Lang, 1979).

From the beginning the nurse-midwife was part of the biomedical tradition. She was clearly subordinated to the physician, and unlike the traditional midwife, the nurse-midwife was not perceived by the physician to be his competitor (Starr, 1982). The nurse-midwives always worked in conjunction with the physician, assuming responsibility for women's pregnancies and birth until the physician could or was willing to "take over" and referring to the physician those women who either had or were judged high risk to have complication. By-in-large, the nurse-midwife was "born" into obstetrics and assumed, without much question, the position and responsibilities she was allotted (Hemschemeyer, 1939).

What often goes unnoticed, however, is that from the beginning the nurse-midwife was not simply a junior physician or a physician-extender but a different type of practitioner. The training and experience of the nurse-midwife incorporated both the biomedical tradition of obstetrical medicine and the practice of traditional midwifery.

Many of America's first nurse-midwives were typically nurses who had acquired their training in England or from English midwives who had been brought to America (Wertz and Wertz, 1989; Rooks and Fischman, 1980; Litoff, 1975). The modern English midwife, unlike her American counterpart, had evolved directly from traditional midwifery. She was a traditional midwife with additional education in the new sciences, particularly human anatomy, and training in the new obstetrical skills and techniques (Donnison, 1977). It is primarily through the English midwife that America's nurse-midwives are connected to women's traditional office or practice of midwifery; and it is through the modern biomedical institution of nursing that the American nurse-midwives are connected to biomedical tradition and the modern skills and technology of obstetrics. From the beginning, the ideology and practices of the American nurse-midwife embodied and integrated both traditions. In fact this amalgamation or wedding of traditional nurse midwifery and modern obstetrics continues to be evident in the American College of Nurse-Midwifery's definition of themselves and their practice:

"A certified nurse-midwife is an individual educated in two disciplines of nursing and midwifery, who possesses evidence of certification according to the requirements of the American College of Nurse-Midwifery. Nurse-midwifery practice is the independent management of care of essentially normal newborns and women - antepartum, intrapartum, postpartum, and/or gynecologically, occurring within a health care system which provides for medical consultation, collaborative management of referrals. (American College of Nurse Midwifery, in Armstrong and Feldman, 1990, p 266, fn.)

Nurse-midwifery developed slowly over the next five decades. However, once the nurse-midwife entered the mainstream of biomedical care in the 1980's, both the ideology of the practitioner and the practice of nurse-midwifery have begun to have a

profound effect on laymen's relationships with their professional health care providers, on the organization of relationships within the biomedical disciplines, and on the prevailing knowledge about birth and expectations of women and their bodies. More specifically, the nurse-midwife's integration of traditional midwifery and of the science and technology of modern biomedicine has created a framework for perceiving women, birth, and interpersonal/interprofessional relationships in such a way that they, through the very acts of attending women's births, challenge fundamental tenets of the theory and practice of biomedicine:

1. the paternalism inherent in the organization and structures of biomedicine
2. the ancient mind-body dichotomy
3. the notion that medical progress depends on the development of and the greater use of sophisticated technology
4. that the causes of disease can be explained by their mechanisms or that health, normal pregnancy and childbirth can be defined as the absence of disease and complications.

Early Successes of Nurse-Midwifery

The first nurse-midwifery service was the Frontier Nursing Service (FNS) established in remote rural Kentucky in 1925 by Mary Breckenridge, a nurse who traveled to England to acquire her training in Midwifery (Breckenridge, 1981; Litoff, 1975). The first American program for preparing nurse-midwives began in 1932 at the

Maternity Center Association (MCA) in New York City (Rooks and Fischman, 1980).

Interestingly, these nurse-midwifery programs were initiated in the mistaken belief that traditional midwives had had their practices thrust upon them by their neighbors and that the rural "grannies" and the immigrant midwives practicing in America's large cities were responsible for the unacceptably high rates of maternal and infant mortality (Litoff, 1975; Breckenridge, 1981; Antler and Fox, 1976). The construction of biomedical services and practitioners seemed to many to be the obvious solution for both problems.

Nevertheless, nurse-midwives quickly proved to be effective birth attendants. By 1931, the Frontier Nursing Service reported some 800 deliveries and only one maternal death. The accomplishments of the nurse-midwives at the New York Maternity Center Association were equally commendable; in their first 1,081 deliveries, there was only one maternal death (Litoff, 1975). Between 1925 and 1954, the FNS reported 11 maternal deaths in 10,000 deliveries; and in over 8,000 deliveries since 1952 there were no maternal deaths (Litoff, 1975). Still births and neonatal mortality rates also declined with the institution of nurse-midwifery care. Significantly, this was achieved in poverty-stricken areas where many of the women were considered high risk and most births occurred at home (Litoff, 1975).

Despite an established record of success, however, nurse-midwifery gained little recognition from either the medical profession or the public. By the time nurse-midwifery was established as a safe, effective way of doing birth, it was beginning to appear as if they would no longer be needed. Physicians had achieved better mastery over their technology and the biomedical community had better control of the individual

doctor's practice of obstetrics. The development of blood banks, sulfa drugs, and finally antibiotics gave physicians the technology necessary to treat hemorrhage and infections, the primary causes for maternal mortality (Wertz and Wertz, 1989). After World War II, hospitals and university educated physicians were more numerous and more accessible. Automobiles and paved roads solved the accessibility problems for most rural women; and in the 1950's and 1960's with the expansion of social and medical welfare programs, most poor women had ready access to a physician-attended hospital birth (Wertz and Wertz, 1989; Burst, 1983). The need for midwives of any type, traditional or nurse-midwives, decreased markedly and home deliveries were no longer necessary; all women, when labor began, could go to the hospital.

Growth in the Practice of Nurse-Midwifery

By the 1960's the nurse-midwife, like the granny, seemed superfluous. Physicians, not nurses or midwives, were the modern women's birth attendants. And now that they were readily available and accessible, the nurse-midwife also became an obstacle to be eliminated. It was never intended that the nurse-midwife become a competitor to the physician. During the 1960's the practice opportunities for the nurse-midwife were severely restricted. Between 1963 and 1968 the numbers of nurse-midwives began to increase, but the proportion of those in clinical practice declined (Rooks and Fischman, 1980). By 1973, there were approximately 1300 nurse-midwives in the United States. They were concentrated in the northeastern states and they attended about 4,000 births, about 0.1% of the total births that year (Wertz and Wertz, 1989).

There were, in fact, more lay midwives, approximately 2,900, clustered in the southern and southwestern states, who were delivering just over 23,000 or 0.6% of the babies in 1969.

By 1976-1977, the numbers of nurse-midwives had again increased. In 1976, there were more than 33,000 deliveries reported by nurse-midwives or just over 1% of the total births for 1976 (Rooks and Fischman, p 991, 1980). During the same period, the number of nurse-midwifery programs (certificate and degree) grew from 7 in 1960 to 21 by the end of the 1970's. And, full nurse-midwifery practice including the management of labor and delivery was legal in every state but Kansas (Ibid, p 992). The total scope of services that nurse-midwives, individually and collectively, were providing, however, also included prenatal care and family planning, childbirth and child care education, post partum and follow up of the newborn for the first few days after birth, and providing gynecological care and routine sexual counseling to non-pregnant women.

Since 1980, the numbers of nurse-midwives and the percentage of births attended by nurse-midwives has continued to grow. Almost all the growth (93.2%) in midwife attended births between 1975 and 1988 were in-hospital births (Declercq, 1992, p 680). Between 1982 and 1987, the numbers of nurse-midwives certified by the Academy of Certified Nurse-Midwives (ACNM) increased by 55.3% (Adams, 1989). And, by 1990 there were over 3300 CNMs in the United States, and they were attending approximately 4% of the births in this country (Armstrong and Feldman, 1990, p 266).

The success and growth of nurse-midwifery is in large part attributable to women's interest in and insistence on alternatives to medicalized birth. Nurse-midwives

are no longer providing maternity care just for the economically disadvantaged and geographically isolated; middle class women have discovered the nurse-midwife and found her a desirable birth attendant. The percentage of births attended by nurse-midwives has continued to increase yearly. In 1989, CNM's delivered 3.1% of hospital births and 63.1% of births in freestanding birthing centers; by 1992 they attended 4.4% of hospital births and 67.4% of births in birthing centers (Ventura et al, 1994). In 1993, nurse-midwives attended 4.8% of hospital births (Ventura et al, 1995). Although exact statistics characterizing the demographics of nurse-midwives's expanding practice base are not known, two things are known that strongly suggest that their increased clientele is largely from America's middle classes. First, with the increase in midwife-delivered hospital births there has been a concomitant decrease in physician-attended deliveries, which suggests that nurse-midwives are taking patients away from physicians (Ventura et al, 1994; Parker, 1994). Secondly, birthing rooms and birthing centers have given middle-class women a way to avoid the hospital environment and still have medically trained attendants (Wertz and Wertz, 1989; Declercq, 1993; Ventura et al, 1995). Moreover, birthing rooms and now birthing centers have given nurse-midwives their own place to practice as well as a chance to develop a clientele of middle-class women.

Nurse-Midwifery Comes to Houston

In the early 1980's, there were no nurse-midwifery programs in Texas; and the few available nurse-midwives were typically employed by University Schools of Nursing to teach maternity or obstetrical nursing, or by physicians as maternity nurses with

extended responsibilities for the prenatal and gynecological patients. This had been Sammi's role. When I first talked with Sammi, a CNM, in 1981, she had been working with Dr. T for several years. He was a busy obstetrician and she described her role in his practice as educating the patients. "That's the most important aspect of my job, I help people help themselves, and my patients do not have the problems that the doctor's patients have. Anyone can catch babies, it is everything that leads up to that that counts." Occasionally, Sammi attended a home birth for Dr. T but in 1981 her access to hospital delivery rooms was limited; and delivering the baby was the aspect of providing maternity care that Dr. T had reserved for himself.

At the beginning of the decade, few nurse-midwives in the Houston area were seeking more independent practices or hospital privileges. According to Barbara, a local lay midwife, pursuing a generic masters degree with a clinical specialty in nurse-midwifery at an east coast university, her classmates, whether from Texas or elsewhere in the United States, who were nurses before they were midwives were less interested in pursuing private practice after becoming a CNM. "Nurses tend to look to physicians and hospitals for association and employment rather than as professional colleagues with whom interdependent and mutually beneficial professional relationships might be developed." Barbara identified three distinct attitudes among her classmates; those like herself, who were interested in establishing a private nurse-midwifery practice, those who saw private practice as a career goal, but felt constrained by institutional or personal obstacles; and those who actually questioned the legal and ethical basis for nurses "...setting themselves up like doctors."

While there may not have been many nurse-midwives ready to become "independent" practitioners, the medical climate in Houston was not conducive to the emergence of an autonomous nurse-midwife. The practice of midwifery was legal in Texas, but that was not the general perception within the biomedical community. Nurses were often told that although the practice of lay midwifery was legal, it was somehow illegal for nurses to associate with home birth. One informant, a nurse, stated that when co-workers discovered that she was intending to have a home birth, they tried to convince her not only to have her baby in the hospital where it was safe, but that she could lose her nursing license if she had a home birth. Frightened, and beginning to reconsider her decision, she called the State Board of Nursing to verify what her co-worker had said. She found that having a home birth would not affect her license to practice nursing. She went ahead with her plans to have a home birth, one of the best decisions she ever made.

Nurse-midwifery came to Houston a year later. By 1982 the county hospital was experiencing over 15,000 births a year and the projections for the immediate future were that the numbers of births were going to increase at a rate of at least 5% a year (approximately 800-1000 births) for the next three to five years. This county hospital was the largest public delivery system in the United States, and the associated university medical school was unable to provide sufficient obstetrical residents to meet the escalating service demands of the hospital. According to one of the county hospital administrators, the obvious choice was to add more residents through the affiliated medical school. The Chief of Obstetrics, who was also an associate professor at the university medical school argued that the university approves residency positions on the

basis of the educational needs of the residents rather than the service needs of the hospitals in which they practice. "It's not good enough to say we need more residents to deliver more babies...the council won't approve residency on service needs. The residency program is an educational project, not a service project. Currently we're at the top number of residents based on education that we'll get approved" (Wilson, 1982, p 13).

Once it was determined that the other university medical school was unwilling or unable to expand their medical service and that a significant number of births could not be contracted out with other area hospitals, the option to use certified nurse-midwives emerged. Although some argued that the use of physicians was a better solution because of their advanced level of training, the decision to hire midwives was made. The midwifery program began in November 1981 when nurse-midwife positions were funded by the county hospital district, and five CNM's joined the university medical staff (Wilson, 1982). Midwife deliveries began in January 1982. By November of 1992 these five midwives were working 60-65 hours a week, delivering about 20-30 babies a month, and helping physicians by delivering non-midwifery patients when they were not attending their own patients. Advocates of the nurse-midwifery program were excited and planning for its expansion, however it was not anticipated that it would include the private sector. According to the Chief of Obstetrics, "First you have to have a need. In private practice, there are plenty of obstetricians. There's no need. But in the hospital district there is a special situation. Need is what brings on this sort of thing" (Wilson, 1982, p 16).

But there was a need in the private sector; some middle-class women in Houston, as well as in other parts of the country were dissatisfied with medicalized birth. Lay midwifery was already established in the area. What is probably most striking about the chief of obstetrics' comment was that it revealed how out of touch he was with the changing birth preferences and needs of middle-class women, "the private sector."

Nurse-Midwifery Moves into the Private Sector

Within two years, nurse-midwives, initially employed by the county hospital, had moved into the private sector. In 1986 the other local medical school had initiated a nurse-midwifery service. The story which follows was Anna's recollections of her first months at the university's teaching hospital and my observation of the school's Obstetrical Grand Rounds when Anna and the nurse-midwifery practice were formally introduced to the residents, medical students, and hospital (ob) nursing staff by the chief of staff and the Chair of the Department of Obstetrics and Gynecology of the medical school. Before this introduction took place, Anna had been on staff for a couple of months and had even attended several births.

Anna's Introduction

The initial reactions to Anna, a certified nurse midwife by both the residents and the hospital nursing staff had at best been ambivalent. There was no general consensus that she or the practice of midwifery were either necessary or desirable. Other professionals did not seem to know how to relate to her. Her reception from other hospital employees and personnel from health insurance companies was even less positive. According to Anna, one of the hospital's telephone operators had told a prospective patient that the hospital did not have midwives anymore; they were illegal. An insurance carrier's representative with whom Anna often talked to confirm a

prospective patient's benefits gave her a lecture on "why no one would want to use a midwife when there were so many good doctors around. And, the medical school residents and hospital nursing staff seemed almost confused by her presence; they neither knew what she did nor how to relate to her. She had left routine orders that nursing had been unwilling to carry out and residents had either countersigned or re-written and revised her orders.

In order to address these and other related concerns, Anna had approached the chief of staff and the chairman of the medical school's department of obstetrics and gynecology about talking with "everybody" about her position and practice of midwifery.

The forum chosen was the monthly department rounds. This is a forum in which residents present selected cases for review but also in which issues of hospital policy and medical management are routinely discussed. Nursing and nursing management are always well represented; and reportedly, they often utilize this forum not only for their own continuing education but as a vehicle for bringing problems to the attention of the medical staff. Anna had invited me to attend the July rounds.

The conference room at the medical school was crowded; people were squeezed in around the large conference table as well as around three sides of the room. The Chief of Staff occupied the head of the table, and two nurses, one of whom appeared to be nursing's spokesperson, occupied the top right corner of the table. The Chairman of the Department sat to the right of the nurses. One of the residents who was to present sat halfway down on the right side of the table, and one of the third year residents was planted squarely at the end of the table. Anna initially sat about half way down the left side of the table. Others, medical students, residents, nurses, were arranged more or less randomly around the table and along the walls; they appeared to take an available seat upon entering the room. The seats at the table were taken first by the residents and medical students; latecomers filled the seats, then stood along the walls.

After a few apparently routine announcements, the Chief of Staff introduced Anna. As she started to balk, it became evident that she was going to be difficult to hear; peoples' attention was focused on the head of the table. Anna stood, then moved to the head of the table. The Chief of Staff and the physician next to him moved to the side to accommodate her. As she sat down more or less at the head of the table, there occurred a brief period of nervous comment, joking and shifting of body positions. These brief moments of adjustment almost appeared "ritualized" and seemed to symbolize the discomfort and disorientation that many of those sitting around the table felt about the presence of and relationship to Anna, a midwife.

As Anna talked about coming to the university to initiate a midwifery service, the various groups and individuals began to verbalize their particular concerns. As the resident at the end of the table began to ask very specific questions about what she was competent to do and who her patients "really belonged to," another resident sitting on the perimeter of the room moved to stand behind the third-year resident. Others scooted their chairs or leaned their bodies toward him. Following his lead, these other residents began to ask Anna, then the Chief of Staff questions to elicit information about where a midwife fit into their chain of command and how they were expected to interface with her. The nurses, much like the residents, appeared to focus their concerns on the pragmatic issues

associated with the delivery of medical care. They wanted to know who they were to call if one of Anna's patients "spiked a temp" at 2 am. Would she come in or would the resident on call be responsible? Interestingly, there were more questions about what nursing procedures Anna would be doing than there were questions about the types of medical procedures she might perform. Nursing's spokesperson wanted to know if Anna would start her own IVs and if she would be writing orders for the nursing staff. At that one of the residents asked how the nurse would feel about or respond to Anna writing orders. The nurses as well as the residents wanted to know what was a medical decision and what decisions could be made by a midwife.

At this point, the discussion no longer actually included Anna, although it was very much about her. Both the nurses and residents were looking to the department Chair and the Chief of Staff to clarify roles and responsibilities. Their responses were hardly definitive, but they tended to characterize Anna's emerging practice as being "like a resident." It was unclear that the residents would or would need to have much direct contact with her; in other words, it was not clear how she would fit into the hospital's structure or medical hierarchy. Both of these men, however, expressed clear ideas about what they were attempting to accomplish by initiating a nurse-midwifery service within the medical staff. The department Chair saw Anna's role as "making it possible for the hospital and obstetrical service to keep a significant number of women who were not 'kooks' but want a natural childbirth experience and who also wanted the safety and security of a hospital delivery and medically competent attendants." The Chief of Staff who had had extensive experience with nurse-midwives did not disagree but added that in Ireland he saw a midwife's presence as "one of numerous steps to reduce the incidence of cesarean sections." He expected the residents to take Anna and the practice of midwifery seriously and learn from her.

Discussion came to an end. Anna, who had been more of an on-looker for the past twenty minutes, thanked the group for their attention, and hoped to be working with the residents and nurses as she attempted to develop her role and establish a midwifery service. The Chief of Staff then initiated the first of two planned presentations; and a discussion of how one patient's ultrasound being placed in another patient's chart resulted in the performance of a cesarean section which was probably unnecessary. Ironically this was a situation which probably would not have occurred if the resident had been talking with the expectant mother rather than attending to the interpretation of the technologically generated data.

Observing Contemporary Biomedical Relationships

When one examines the dynamics of Anna's introduction to the hospital's medical and nursing staff, the most obvious conclusion is that Anna and therefore the

practice of nurse midwifery did not easily fit into the established system of physician-nurse relationships and responsibilities. It was not just that the nurses and obstetrical residents in the meeting did not quite know what Anna could do or would be doing, they did not know what she was to do for them or they for her. This confusion carried over to her patients; all of a sudden otherwise competent practitioners did not know who to call or who to treat. The attempts of the department chairman and the chief of staff to explain where Anna and the practice of nurse-midwifery into their existing obstetrical service finally ended in an explanation which essentially said she did not fit into the existing structure, there is no known role within the hospital or the biomedical hierarchy which establishes an independent professional practice, like the obstetrician, but she has the authority of an advanced student, "like a resident." It appeared that the chief of staff's and the department chairman's motivations for recruiting Anna and establishing a nurse-midwifery service were, like those of the chief of obstetrics at the county hospital, largely pragmatic. Middle class women typically had medical insurance, and they were interested in continuing to attract this clientele. It was unclear that either of these two physicians had anticipated the concerns of the nursing staff or of their residents; in fact, it was unclear that they had considered how the presence of Anna and the practice of nurse-midwifery might impact either the structure of practitioner relationships or the configuration of maternity services. In the end, Anna was added to the medical school's faculty and nurse-midwifery was added to the hospital's maternity services because it solved a problem. At the end of her introduction, it was more or less clear that Anna's initial acceptance by nurses and residents in large part was determined by the department

chairman's authority to make such a decision and the chief of staff's authoritarian comment that he expected Anna and the practice of nurse-midwifery to be taken seriously.

Destabilizing the Biomedical Hierarchy's Complementary, Gender-Oriented Relationships

Anna's presence and the practice of nurse-midwifery appeared to have been as disconcerting to the nursing staff as to the residents. Her outsider position was confirmed by both; and when one looks closely at the contemporary biomedical hierarchy and its complementary gender/professional relationships, it becomes clear why the nurse midwife might be perceived as a threat to the obstetrical nurses as well as to the residents.

What had just become evident was that the structure of modern biomedical institutions and the relationships of the various professionals within the biomedical hierarchy continues to be an expression of nineteenth century Victorian gender ideology, a particular expression of the theory of sexual complementarity (Smith-Rosenberg and Rosenberg, 1973; Schiebinger, 1989).

Table 5.1

**The Theory of Scientific Complementarity:
a Framework for Biomedicine's Roles and Relationships**

MALE: PHYSICIAN	FEMALE:NURSE
Strong	Vulnerable
Curing	Caring
Science of Medicine	Art of Nursing
Independent	Dependent
Invasive procedures use of instruments surgical skills	Non-invasive procedures communication skills empathy and emotional support
Competitive	Cooperative
Interpretation of Tests laboratory x-ray	Clinical Observation symptoms life situation
Use of Medical Diagnosis	Use of Clinical Judgment
Episodic Care diagnosis and treatment of disease	Therapeutic Relationship enhance growth, health and adaptation
Prevention - Early Detection of diseases measurable/observable	Prevention of bio-psycho-social factors which contribute to or increase the risk of problems knowable, but not measurable

By the end of the nineteenth century, scientific arguments had been used to rationalize and to legitimize every aspect of Victorian life. Beginning in the 1880's scientism permeated the country. Middle class women pursued the domestic sciences and middle class men were reforming the professions of law, medicine, theology, and engineering by placing them on a scientific basis (Berliner, 1975). Generally, both

middle-class men and women accepted the theory of complementarity, and it became a framework for modernizing this society's social roles and institutional relationships. The new disciplines and institutions of scientific medicine not only involved the elimination of traditional medicine's holistic conception of the body and approach to treatment but the systematic replacement of traditional medicine's dualistic roles with "modern," "scientific" complementary roles and relationships. Social order and peaceful domestic and interpersonal relationships no longer depended on blending or integrating male and female, dominant and subordinate roles but in establishing and maintaining separate realms of activity and influence. Many women, including the majority of the leaders of the new profession of nursing, did not seriously question the notion of separate spheres or male dominance in society or in the medical field. Typically their interests were not in changing the social order but to solving problems related to their own educational and occupational problems (Ashley, 1975). As a result, nurses were never equal to physicians; and although they provided efficient care for the sick, they had little influence on the development of hospital care after the nineteenth century. In medicine, as well as in the home, the schools, even business, women's qualities and services were still considered essential, but like women themselves, domestic and domestic-like services as well as feminine attributes and characteristics were always less valuable and inferior to the masculine attributes of her male counterpart.

As dichotomy replaced duality, purity replaced harmony as this society's principle for organizing its social roles and relationships. The roles of the physician and nurse developed in such a way that they mutually defined each other - one is what the other is

not (Lakoff and Johnson, 1980). However, it is not just nurse and physician that are so defined, but our entire philosophical set, male and female, cure and care, rational and intuitive. Hence terms are not only related horizontally but vertically, forming a common matrix in which reference to one pair, i.e. rational and intuitive or science and art, evoke allusions to gender differences, and to specific medical roles and modes of practice (Jordanova, 1980, p 43). Debates about mode of practice, curing vs caring, about ones attitude toward one;s colleagues, competitive vs cooperative, or about professional discipline, physician vs nurse, are also about gender, male vs female. The matrix of mutually defined dichotomies, then defines both the essence of both professions and what it means to be a "good" nurse and a "competent" physician. It gives directionality to the processes of professional development as well as an implicit set of evaluative criteria. And, characteristic communication patterns have evolved to re-enforce the prescribed complementary gender relationships and the associated matrix of personal attributes and professional activities.

The cardinal rule of the game is that open disagreement between the players must be avoided at all costs. Thus, the nurse must communicate her recommendations without appearing to be making a recommendation statement. The physician, in requesting a recommendation from a nurse, must do so without appearing to be asking for it. (Stein, 1967, p 700).

Women's "Professional" Problem

In recent years, women generally and nurses specifically have become overtly dissatisfied with their assigned images and allotted roles in both society and medicine.

Women have begun to rediscover other aspects of themselves and their abilities. And, as

they have discovered their capacity for intellectual and instrumental activities, they have, in increasing numbers found ways to re-enter the professions of medicine, law and theology and make a concerted effort to upgrade or professionalize the women's realms of teaching and nursing (Gordon, 1986; "Leadership: Problems and Possibilities in Nursing" *American Journal of Nursing*, 1972; Gussman, 1982; Sohler, 1992). Entering the professions or becoming more professional, however, often presents a problem for women. It has often meant somehow becoming "less of a woman" and becoming "more of a man." For nurses, this transformation has often meant becoming more of a doctor, acquiring the characteristics here-to-fore attributed to masculinity, and taking on functions previously reserved for the doctor, abandoning feminine characteristics and activities of caring and nurturing.

As a result many of the current changes are more apparent than real; more women have achieved positions of status and influence; but status and power are still defined in male terms and exemplified as masculine qualities. The presumed links between women's biology and women's intellectual and instrumental capabilities are less certain; but the social structures of institutionalized patriarchy are still intact. Rational knowledge, clinical tests, is still more valued than intuitive knowledge, clinical judgment, diagnosis and treatment (curing) are still more important than assessment and intervention (caring), and physicians are still paid more than nurses. Real change involves not only the recognition of and appreciation for women's intellects and capacity to perform complex technical skills (the basis for women's systematic exclusion from the occupations) but a reappraisal of the "woman" attributes; if they are desirable qualities for

women to have, then they are probably worthwhile human qualities which should be cultivated in men as well as in women. If intuitive thought is valuable then men should be encouraged to develop those skills as well as those of reason and rationality. Moreover, real change undermines patriarchy not by excluding or necessarily devaluing men and masculine contributions to civilization, but by re-evaluating women's contributions. If raising children, educating the young, and caring for the sick are important social contributions, then they are not inferior forms of social activity; they are different forms of social activity which require both learning and experience.

Explaining the Anomalous Position of the Nurse-Midwife

Herein are the clues to what makes the nurse-midwife a different kind of practitioner. One, who upon closer examination, is neither a "lesser prepared" physician nor just a "better prepared" nurse. The nurse-midwife, who is usually a she but can be a he, typically operates in the middle ground between Medicine - curing and Nursing - caring, utilizing the skills and the knowledge each has had to offer. This broader perspective and enlarged repertoire allows considerable flexibility in her approach to both understanding and managing women's and couple's particular childbirth needs and preferences. Some of the differences between the practice were captured by the then Dean of Yale University's Nursing School who saw nurse-midwifery as a model to be emulated by all of nursing's clinical specialists and practitioners:

The values of nurse-midwifery care include genuine interest in the health of women, as opposed to institutional sexism or discrimination; patient participation as opposed to paternal patronization; noninvasive, low intervention as opposed to inappropriate high technology; clinical judgment

replacing over-dependence on laboratory findings and tests; attention to the "soft" non-medical aspects of care receiving as high as or higher priority than scientific taxonomy and diagnosis; concentration on the patient in the context of her living environment as opposed to routine, impersonal, episodic intervention; continuity replacing fragmentation; early intervention and prevention supplementing cure; excellence of care as the source of personal power rather than administrative fiat or numerical productivity. (Diers, 1981, p 86).

Formulating Another Medical Model

Nurse-midwives are often criticized by feminists as not being radical enough and as being too dependent on physicians. I have heard lay midwives complain that nurse-midwives were too concerned with and involved with pathology and too limited by hospitals. Ironically, obstetrical nurses will often complain that they let their labor to long and that they do not adhere to the department's policy and procedure. Kate, Anna's partner, had, in fact, upset one private hospital's nursing staff with her "jungle births" - squatting births in which the mother was out of bed when she pushed out the infant and Kate eased the infant on to a pad or a mat on the floor. This propensity to experiment and to encourage their "moms" to find a position, a place, and techniques that worked for them, would also, from time to time put them in conflict with the obstetrical nurses' sensibilities. In order to control the nurse-midwives unconventional methods, and, in fact, the anxiety that these different attitudes about and approaches to birth were evoking in them, the nurses would from time to time report them for violation of various hospital policies or for not conforming to approved procedures. The residents, according to Anna, were less likely to be upset by their unconventional methods; she thought that they were

rather curious, and every once in a while a resident would ask to attend a birth with her. Their most typical comment afterwards: "I've never seen anything like that." Residents' were more likely to complain about "Anna and Kate letting those women push them around." Anna seemed to find such criticisms rather amusing - "... they're just afraid that their parents will start making similar demands on them."

Nurse-midwives were obviously doing birth differently, and judging by the reaction of other practitioners around them, their practice of nurse-midwifery was beginning to have an impact; they were meeting resistance. Just how different the practice of nurse-midwifery is from either the practice of obstetrical medicine is in part evident in Angelina's utilizing care as a primary strategy for preventing a recurrence of post-partum depression. Rachel's description of Barbara's birth demonstrates not only a great deal of flexibility and patience in managing birth but reveals the evolution of some very different explanations for the development of complications of pregnancy, postmaturity, and of labor, dystocia.

Angelina's Story

Nurse-midwives spoke regularly about their concerns about particular women and the things they did or suggested to keep them going, encourage health, healthy attitudes as well as healthy bodies. They worked hard to keep normal pregnancies normal and women's attitudes about their changing bodies and impending births positive. Most often what they did was listen to women's concerns, attempt to counteract others' negative comments, especially remarks such as "... boy, are you getting fat," correct

misinformation and encourage flexibility in women's attitudes and expectation. Both Anna and Kate contended that if a women was to have problems or develop complications, they were always worse if she was particularly anxious or had fixed expectations of what her birth experience would be like or how she would respond to labor.

Although the nurse-midwives I talked with knew that the time they spent with "their moms" made a difference, it was not something that they could readily prove. One never quite knows about those things that do not happen, if, in fact, they would have happened if the person's attitude or expectations had been different. In the following case, however, there is reason to state that the time and support provided by Angelina did make a difference. Georgia had already had two severe post partum depressions, and despite the stress of having a child with a severe birth defect, Georgia did not "get sick" again. This is the story as Angelina told it to me:

A: ... Georgia had had two previous severe post partum depressions - we're talking taking drugs, going to the "shrink", unable to get out of bed, being real real unhappy.

J: Very sick -

A: And, then she came to me. She was very fragile, and she said: "I cry all the time. I want to be pregnant; but pregnancy is a terrible time for me." I sat there and we talked for a long time - just to make sure she really wanted to be pregnant, was happy about being pregnant. Then I said, "Let's do something real basic. Let's build you up - make you physically healthy. I think that if we can make you real healthy, you can feel better." So we did three things - started her on vitamin supplements with a cart-load of iron, got her to walk 30 minutes to an hour everyday. I said: "I want you out there sniffing rain drops if its raining." We're talkin outside in whatever weather, if it's hot or cold - "Smell the fresh air, look at the flowers, experience the temperature changes - get out and walk!" And the other thing I told her was that I wanted to see her frequently.

J: More often than the usual once a month during the early months of pregnancy?

A: I saw her every two weeks for the rest of her pregnancy, until it got to every week. And, by the middle of her pregnancy, she blooms - I mean her color was good, she felt good, and she talked about how blessed she felt and how wonderful she felt - She's convinced it's that I personally injected her with happy feelings. All I did was to create a plan that worked for her. And so when her child was born - previously she'd had also two post partum hemorrhages that were frightening to her when they happened; they really dropped her blood count, you know. Well, this time she came in, had the world's easiest labor, pushed out this giant child and then proceeded to have a post partum hemorrhage which took 4 or 5 minutes to get under control. Afterwards, she was real impressed - not only had she had this wonderful pregnancy, she just couldn't believe that a midwife had gotten a hemorrhage under control so fast, so gently - when no one had been able to do it in her other pregnancies. Then she went through a very frightening two weeks when her baby went through congestive heart failure and several episodes of cardiac arrest -

According to Angelina, the baby had become severely ill about 3 days after birth. It had a congenital heart anomaly, tetralogy of fallot, and became symptomatic when the patent ductus arteriosus closed. Georgia went through some really difficult, sad times, but she did not have a recurrence of her depression. Angelina explained it this way:

A: I'm convinced we were able to get her the kind of prenatal care she needed for her, for that pregnancy - We got her to where she needed to be to survive - And, that's to me the epitome of midwifery care - And, she's convinced she survived all the sad time and anxiety because of her midwife - Her midwife is convinced that it was just some vitamins, some iron, and some exercise.

Holding on to the Pregnancy - Post Maturity: The Effects of a Conflicted Relationship.

Since beginning her own practice, Rachel had become increasingly willing to entertain social-psychological explanations for the occurrence of complications of pregnancy and child birth. She briefly described a woman she was caring for at the time.

Barbara's first pregnancy had terminated at about 44 weeks; she is now 40 weeks and showing no physical (cervical change) or psychological (expressions of readiness or desires to have the baby) signs of impending labor. Rachel had come to the conclusion that it was time to talk with her about "letting go" of her pregnancy. This was not the first time she had seen a woman "hold on to her pregnancy" and had begun to speculate that Barbara's marital relationship might have something to do with either attempting to prolong her special position or doubling her adequacy to mother or care for her infant. Anna observed "... infant care within the womb is really very simple compared to extra uterine care; nature or your body does most of the work for you."

The fact that pregnancy for women can be a very special time was alluded to by Sharon who talked about "having secrets" (see Ch. 3, Sharon's Story). Rachel, however, had been impressed by the special attention and treatment women sometimes received from their husbands; sexual demands were often less overwhelming and the spontaneous demonstrations of affection were often significantly increased. She recalled one woman who had at week 41 begun to discuss her relationship with her husband. Apparently, her husband was willing to just hold her hand and stroke her hair for extended periods of time. It felt so good and since she never received this amount or type of affection prior to becoming pregnant, she guessed that she was reluctant to give "it" up. She dreaded the thought of "things returning to normal" after the baby was born. For her, the loss of her pregnancy (birth of her child) and the loss of her husband's affection (the resumption of his sexual demands) had coalesced. She resented his demand, but was more fearful that she would be able to meet the dependency needs of her child and satisfy

her husband. Significantly, after she took steps to resolve the tensions between her husband and herself, she went into labor less than twenty-four hours later, and had a relatively short labor and uncomplicated delivery. Her infant son demonstrated only very subtle signs of postmaturity and developed no overt complications.

The outcome for Barbara was, however, somewhat different. They had planned a home birth, and Mary's husband was wanting to deliver the child. She went into labor one week later, a 41 week gestation. Anna was called, but on the way, her car broke down. She was able to arrange for Pat, previously a lay midwife and now a student in the local midwifery program, to cover for her until she got her car towed and arranged alternative transportation. Within an hour she arrives; Pat informs her that Barbara was 10 cm. dilated and that delivery appears to be imminent.

Soon it was evident to Rachel that birth was not imminent. Nothing seemed to be happening; the infant had not crowned, so Anna performed a vaginal exam, something she reported she does not do routinely. She found that Barbara's cervix was only 8 cm. dilated and "floppy." Still there was no "progress"; Rachel found this unusual and suspected that Barbara was having difficulty "letting go." Labor continued over the next few hours, but still there was no progress. In fact, the exact opposite seemed to be happening. Barbara's cervix was swelling, but it was also closing, shutting down, going from 10 cm. dilation to 8 cm. to 7 cm. and finally to 5-6 cm. According to Rachel, "the energy in the room had changed. And, as Mary's cervix closed, Rachel became increasingly concerned; she called her backup. Since there was no signs of fetal compromise, no bleeding, no meconium staining, or alterations in the fetal heart rate, she

and her physician backup decided it was safe for Barbara to continue to labor. She attempted to help Barbara focus on "letting go" and encourage her to talk about her concerns about her relationship with her husband.

Barbara's husband, on the other hand, was getting impatient. Once Anna brought up the possibility of needing to transport Mary to the hospital if her labor continued without progress, the husband's impatience turned to anger. He begins to yell at Barbara to let go, to let the baby out. Mary's concern was not about going to the hospital but that her husband thought that it was her fault, that she was depriving him the experience of delivering his child.

Ironically, once the decision was made to go to the hospital, the energy began to change. Rachel was aware that the labor was again progressing, and she began to fear the possibility of in transit birth. Her concerns about the well-being of the infant were beginning to mount; she had seen signs of meconium staining. If she had to deliver the infant along the way, then it would be handled.

Upon arriving at the hospital, they were able to go right to the birthing room. Routine procedures began to be administered "automatically" despite Rachel's questions and protests; but there was little time to pursue the issue - As soon as they were in the hospital's birthing room, it was evident that birth was imminent and Dr. R., Rachel's medical backup was not going to arrive in time. "Once the baby began to move into the birth canal, things moved quickly. For the first time Barbara was beginning to work with her body. There was meconium; I was focused on getting the baby delivered." Rachel did not have delivery privileges at this hospital, but the labor and delivery nursing staff

reportedly stepped aside and allowed her to catch Mary's baby, a 7 lb. 13 oz. boy. who had an apgar of 6 at birth and 9 at 5 minutes.

After the birth, Barbara's husband accepted the transfer to the hospital even though he had not gotten to deliver his son; he had observed the baby's initial problems. Rachel remains convinced that Barbara really did not want her husband to deliver their child, that she wanted to be in the hospital but have a midwife rather than a physician as her birth attendant. And, that was exactly what happened. Anna went on to observe that issues of control and withholding which were such prominent aspects of their child birth experience also permeated their marital relationship. Somehow, everything was a potential struggle for this couple; they worked against and competed with each other rather than working with each other co-operatively.

CONCLUSION

TIMES PAST -- TIMES PRESENT -- TIMES FUTURE THREE WORLD VIEWS THREE TYPES OF MIDWIVES

"You know what we are really talking about here, " Malcom said. "All this attempt to control... We are talking about Western attitudes that are five hundred years old. They began at the time when Florence, Italy was the most important city in the world. The basic idea of science--that there was a new way to look at reality, that it was objective, that it did not depend on your beliefs or your nationality, that it was rational--that idea was fresh and exciting back then. It offered promise and hope for the future, and it swept away the old medieval system... in truth that was because the medieval world really didn't work anymore." (M. Crichton, Jurassic Park, 1990; p. 32.

The Pluralization of the U.S. Birthing System

This study began with the discovery of a new type of birth attendant, the lay-midwife, and the recognition that America's medical and birthing systems were becoming increasingly pluralistic. At one level, the pluralization of America's birthing system reflected a growing and increasingly militant group of primarily middle-class women who were dissatisfied with hospital maternity care and with physicians' activist attitude and interventionistic approach to childbirth. The women and couples whose stories were

recorded as part of this study, like the women whose stories have previously been recorded in the literature (Ashford, 1984; Gilgoff, 1987; Cohen and Estner, 1984), sought alternative birth experiences primarily as a result of their own negative experiences with hospitals and physicians. Unlike these previously recorded stories, however, fathers' negative experiences with medicalized birth, also proved to be a primary motivation in a woman's decision to seek an alternative birth experience.

These women and couples considered birth to be a normal physiological process which, in a supportive environment, could be expected to work reliably. Moreover, they wanted to be active participants in their own birth experiences. Finding physicians unwilling to relinquish their control over women and the process of birth, and hospitals unwilling to accommodate their preferences for unmedicated, 'natural' labors and for spontaneous rather than instrumented and surgical births, these women and couples sought alternative settings more supportive of natural childbirth, and alternative birth attendants who shared their definition of birth and belief that if given a chance, the processes of birth would work.

The practice of lay or independent midwifery began to emerge in the late 1960's, in conjunction with, and also a response to, these women's and couples' demands for demedicalized birth experiences. Like the women and couples she attends, the lay midwife remains primarily a phenomenon of the educated, white middle-classes. She shares their definition of birth and belief that women's bodies and the process of labor can be expected to work. In conjunction with other women of like mind, lay midwives have

evolved a practice which is designed to accommodate birth, to support women and to facilitate the process of labor rather than to construct birth by controlling women and the physiological processes of birth (Gaskin, 1969; Ventura, 1955).

Individually and collectively, the women have acquired the knowledge and skills to become competent birth attendants; and they have evolved a practice and a record which effectively challenges both the biomedical definition of pregnancy and childbirth as risky, disease-like conditions, and the necessity for the obstetrician's crisis-oriented approach of maximum strategy.

Deconstructing Modernity's Medicalization of Birth

On another level, women and couples' dissatisfactions with medicalized birth and the lay midwife's alternative definition of and approach to birth are an expression of a more encompassing, more generalized disillusionment with the institutions of modernity, the materialistic explanations of science, and the rational solutions of technology (Nesbitt, 1982; Jencks, 1966). These informants' decisions about their birthing experiences and choice to have a midwife-attended birth were not intended to be political statements. To have an alternative birth experience was a personal expression about what they believed was in their own, their child's and their family's best interest.

None-the-less, their decisions about and choice of alternatives had a wider social-political significance. Consciously or unconsciously, however, these women and the midwives who attended their births are, through their decisions and actions, joining a

larger social discourse which involves not only a rethinking of the efficacy of obstetrics as a total system for doing birth and the deconstruction of the institutions and practice of technological birth ((Davis-Floyd, 1992; Rothman, 1977; Michaelson, 1988) but a rethinking of the mechanistic worldview, of the rationality of science, and of modernity--the Enlightenment enterprise of reconstructing society and social relationships according to the principles of natural law (Tyler, 1989; Capra, 1982; Schiebinger, 1989; Keller, 1985).

In many respects, we as a culture, as a society are in the same place we were two hundred years ago at the close of the eighteenth century. The long accepted representation of man as individual and of the cosmos as a machine have already been divested of empirical reality (Prigogine and Stengers, 1982; Hawkins, 1988; Gribbin, 1993). A new organic picture of man and nature as living systems within a living cosmos are now being generalized from the realm of metaphysical speculation and cosmological revelation to schemata for establishing social order in an increasingly complex and diverse global community and for harmonizing individuals' psychological processes with new ecological views of man's relationship with his natural and social environments. (Ruether, 1992; Watts, 1959).

Consequently, the social structures of patriarchy and of complementary dichotomous relationships, and the ideological systems of Newtonian physics, upon which the obstetricians professional life and scientific practice of medicine depend, are disappearing. Like Mrs. Ballard, contemporary obstetricians appear to be struggling to

maintain their control of the American medical system and of America's birthing system.

They too appear to be struggling to comprehend the re-emergence of midwifery as a birthing system and midwives into their institution (the hospital) and their practice of obstetrics.

As conventional, Newtonian representations of objective reality and Cartesian reductionistic models of the human spirit / mind / animal / body became less convincing and less certain, old medical ideas and previously discredited practitioners have re-emerged in America's medical marketplace (Gevits, 1988); and new ideas about the nature of the body, of health, and of the treatment of disease are emerging, providing new explanations of and treatment for disease (Dossey, 1989) Both are competing ideologically and therapeutically with America's dominant biomedical institutions, scientific theories, and hierarchy of professional practitioners. Physicians' control over the institutions and practices of biomedicine have become less absolute. As a result, a once clearly subordinated practitioner, namely the nurse-midwife, has emerged to compete ideologically as well as professionally and economically with the obstetrician and the practice of obstetrics.

Competing World Views

Table 6.1

COMPETING WORLDVIEWS

	TRADITIONAL	MODERN	POST-MODERN
COSMOLOGY:	Ptolemy	Copernicus	Hubble
MATHEMATICS:	Arithmetic Geometry	Newton's Calculus	Einstein's Theory of Relativity
SCIENCE:	Astronomy Astrology Alchemy	Physics Chemistry	Quantum physics
RELATIONSHIP:	Dualism	Complementary Dichotomies	Negotiated Integration
ORDER:	Natural / Hierarchy Reciprocal relationships	Constructed hierarchies of Domination and Subordination	Developmental Integration of a functional system

There are presently available to women, three broad categories of birthing attendants; physician-obstetricians, lay-midwives, and nurse-midwives. They represent three different responses to the deconstruction of the mechanistic worldview and modernity and to the demedicalization of birth. The physician-obstetrician represents the status quo; and the recent escalation in both the numbers and degree of intrusiveness of obstetrical interventions can be interpreted as an attempt on the part of the physician to affirm the legitimacy of their social and cultural authority and their right to control the institutions and processes of birth. Most women, in fact, continue to utilize physicians as their birth attendants and the hospital as their place for birth. Their reasons are mixed;

some are convinced that birth is dangerous and that use of the latest medical technology ensures them the best possible outcomes; some are frightened by the pain and physical demands of labor; most however, remain unaware of or have not personally had reason to seek an alternative practitioner or birth experience.

The nurse-midwife and the lay midwife currently offer the available alternatives to the physician and medical birth. Significantly, at the level of the consumer, there is little differentiation between these two practitioners. Several of the women did not know there was a difference between lay and nurse-midwives; they identified them both as "midwives." Two of the couples I talked with had had a lay midwife for one birth and a nurse-midwife for another. In both of these instances, their preferences depended on the personality of and their ability to form a relationship with the midwife. Other couples choose a nurse-midwife because their health insurance would cover a nurse-midwife-attended birth but not a lay midwife-attended birth. Nurses, knowing more about what nurses know and how they think were more likely to tell me they felt safer with a nurse-midwife while those without medical backgrounds were a bit more likely to complain that the nurse-midwife seemed too concerned about "all the things that could go wrong." In every case, however, the women and couples were pleased with their choices of birth attendant and their relationship with her. Both practitioners are competent, treat pregnancy and childbirth as natural physiological experiences; and they provide women and their partners natural, personalized alternatives to the impersonal experience of the typical physician-attended birth. Significantly, the difference between the independent

(lay) midwife and the nurse-midwife was not so much in how they defined, or attended women's ordinary or normal births but in the intellectual and social relationship which informs their practice.

Challenging the Complementary Gender Relationships of Late Patriarchy

For over 1500 years, Western tradition has been systematically separating the realms of male and female, men and women, the masculine and feminine. By the end of the fourth century, the androgynous God of early Christianity was well on its way to being replaced by the God of biblical theology, hence the goddesses were evicted from the heavens (Eliade, 1957; Campbell, 1964; Watts, 1958). Subsequently the Church structures became decidedly authoritarian and patriarchal, women were excluded from the priesthood and the female principle in the alchemist's model of creation was reduced to a vessel or a passive receptacle for the active male principle. Patriarchy was firmly institutionalized; women were subordinated to men; she was his spiritual and moral inferior. As a result, autonomous female events, such as birth, were regarded with suspicion; and females, such as midwives, who acted autonomous like men were regarded as natural anomalies, and a threat to the moral and social order (Rich, 1986; Parker, 1994; Achterberg, 1990). The Church and/or the State placed the most prominent of the women healers under the supervision of men who administered their oaths and issued their licenses (Wyman, 1986; Forbes, 1962; Donnegan, 1978). The persona of the midwife had been marginalized.

With the advent of science, common sense axioms of everyday life and experience were no longer adequate to govern the world (Boorstein, 1983). Technology-assisted observation gave men a new vision of the world and, in turn, science provided man a means to dominate and control nature (Dubos, 1961; Jacobs, 1983). By linking the practice of medicine to a knowledge of science and to the concept of natural law, the role and authority of the physician expanded. These changes established the bases for scientific medicine and the incorporation of midwifery into the practice of medicine and the incorporation of midwifery into the practice of medicine; the midwife's replacement, the man-midwife/obstetrician began to emerge from the ranks of the surgeons and barber-surgeons (Wyman, 1986; Risse, 1992; Wertz and Wertz, 1989). The practice of midwifery was progressively taken over by men -- professionalization of the occupations which further limited women's social roles and involvement in the institutional life of the society. In the end, however, the midwife as woman's birth attendant and midwifery as a birthing system were eliminated with the elimination of the dualism in this society's social roles and relationships.

Sexual differences were no longer thought to reside only in the sex organs, but to permeate the entire body. Physical differences, gender or social differences, and psychological or attribute differences were, thereafter, all explained in biological terms (Schiebinger, 1989). Male and female bodies were thought to be each perfectly suited for specific tasks. The scientists complementary relationships based on biological sex replaced the alchemist's dualistic principles based on the cosmic attributes of the male

and female principle. By the 1790's, the theory of complementarity was not only adopted, but reified by the medical community and used to justify sharply differentiated social roles for men and women. There were, or at least there appeared to be, physical biological reasons for women's perceived limitations, delicacy, and their unique nurturing qualities. This framework could not accommodate the midwife; she was now a sexual anomaly--the social role and psychological qualities necessary to practice midwifery were not congruent with women's biological endowment. Motherhood was then not only a social expectation for women, it was determined by their biology; and the doctors' allegations about women's incapacity to deal effectively with difficult births, and their ignorance of the new science of anatomy were no longer based on women's lack of education and training, but on hard scientific facts which delineated the nature and extent of women's capabilities. (Schiebinger, 1989; Ulrich, 1990).

As dichotomy replaced duality, purity replaced harmony, and domination replaced subordination as this society's principles for organizing social relationships; the roles of the physician and the nurse developed in such a way that they mutually defined each other and were linked to a philosophical set, male and female, cure and care, rational and intuitive. So long as this set of dichotomies remains intact, the scientism-patriarchy of the eighteenth and nineteenth century can continue to pervade the construction of contemporary medical roles and the perceptions of the value and competencies of various medical practitioners.

The described phenomenon of the middle class woman/couple seeking alternative birthing assistants and alternative birthing sites indicates that these precepts may no longer be working in our society. The increasing use of the lay midwife and the nurse-midwife seem to be meeting a need unmet by the current system.

The lay midwife solution is to go back to dualism where social birth was intact and worked, back before dichotomism occurred in the social/psychological realms. She reclaims ordinary birthing as women business, leaving complicated birth to the medical/technological/obstetrician practice. The nurse midwife, by virtue of melding the two paradigms, has a practice which is not controlled by the dichotomous relationships. She began her education with the female/caring role, but continued her advanced education in the male/technological/obstetrician tradition of curin. The combination of which indicates a new type of practitioner--curing and caring, science and art, use of relationship before she uses invasive technology, attention to disease but also nurturing health in the presence of disease. Her value is that she can function in both realms, and with experience knows when she should be in which realm. She breaks down the dichotomy; her strength is in the flexibility between the two; she responds to patients scientifically, but also intuitively; her head and heart are not disconnected.

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