The Technocratic Model

Past and Present

The rituals of initiatory rites of passage convey symbolic messages that speak of a culture’s most deeply held values and beliefs. Many of American society’s most deeply held values and beliefs derive from the model of reality we inherited from the Scientific Revolution in Europe. As Carolyn Merchant demonstrates in The Death of Nature (1983), it was during the seventeenth-century period of the rapid commercial expansion of Western society that the machine replaced the organism as the underlying metaphor for the organization of man’s universe. (Prior to this time, the dominant European folk view held that the earth was a living organism infused with a female “world-soul.”) Descartes, Bacon, Hobbes, and others developed and widely disseminated a philosophy that assumed that the universe is mechanistic, following predictable laws that those enlightened enough to free themselves from the limitations of medieval superstition could discover through science and manipulate through technology. These ideas fit in so well with our already ancient cultural belief in our right to dominate nature (chartered in Genesis) that by the end of the seventeenth century they had become the philosophical cornerstones on which rested the belief system of Western society.

As a result of this switch in base metaphors, nature, society, and the human body soon came to be viewed as composed of “interchangeable atomized parts” that could be repaired or replaced from the outside. Merchant says:

[These philosophers] transformed the body of the world and its female soul... into a mechanical system of dead corpuscles, set in motion by the creator.... Because nature was now viewed as a system of dead, inert particles moved by external, rather than inherent forces, the mechanical framework itself could legitimate the manipulation of nature. (1983:193)

Under this model, God set in motion a chain of events. Man could discover the laws by which these events proceeded and could intervene in them for his own benefit. Power was to be “derived from active and immediate intervention in a secularized world” (Merchant 1983:193).

MEDICINE AS A MICROCOSM OF AMERICAN SOCIETY

Obstetrics is the branch of medicine that deals with parturition, its antecedents, and its sequelae (Oxford English Dictionary 1933). It is concerned principally, therefore, with the phenomena and management of pregnancy, labor, and the puerperium, in both normal and abnormal circumstances. In a broader sense, obstetrics is concerned with the reproduction of a society.

—Cunningham, MacDonald, and Gant, Williams Obstetrics

The widespread cultural acceptance of the mechanical model in the seventeenth century was accompanied by the fragmentation of the system of organized religion which had unified the conceptual framework of European society. As the mechanical model itself became the conceptual factor “unifying cosmos, society, and self” (Merchant 1983:192), the primary responsibility for the human body, a responsibility that had once belonged to religion, was assigned to the medical profession. This developing science had taken the mechanical model as its philosophical foundation and so was much better equipped than religion to take on the challenging conceptual task of transforming the organic human body into a machine—a transformation that was crucial to the development of Western society.

The elaboration of an intelligible conceptual universe is an essential step in the formation and continuation of any society. Social cohesion and continuity are enhanced when a society’s founding metaphors for cosmos, culture, and individual self are consistent with each other—when each element becomes a scaled-down version of the other. Such
problem for us in the 1600s when they established the conceptual separation of mind and body upon which the metaphor of the body-as-machine depends. This idea meant that the superior cultural essence of man—his mind—could remain unaffected while the body, as a mere part of mechanical nature, could be taken apart, studied, and repaired:

The Cartesian model of the body-as-machine operates to make the physician a technician, or mechanic. The body breaks down and needs repair; it can be repaired in the hospital as a car is in the shop; once fixed, a person can be returned to the community. The earliest models in medicine were largely mechanical; later models worked more with chemistry, and newer, more sophisticated medical writing describes computer-like programming, but the basic point remains the same. Problems in the body are technical problems requiring technical solutions, whether it is a mechanical repair, a chemical rebalancing, or a “debugging” of the system. (Rothman 1982:34)

That this paradigm is still strongly with us, despite changing times and technical capabilities, is clearly illustrated in the February 1989 issue of Life: “If we think of the human body as a kind of machine, doctors of the future will be like mechanics, simply replacing those parts that can’t be fixed.” Anthropologist Emily Martin argues that obstetricians are more like supervisors than mechanics, given that their primary role in hospital birth is, increasingly, the “active management” of labor and birth (1987:57). Certainly obstetricians are also highly skilled, hands-on technicians: their training stresses the acquisition of the most sophisticated technical knowledge and expertise that can be brought to bear on the birthing body-machine.

In the seventeenth century, the practical utility of the application of this mechanical metaphor to the human body lay in its removal of the body from the purviews of religion and philosophy, as well as superstition and ignorance. To conceive of the body as a machine was to open it up to scientific investigation and get on with the research, leaving all bothersome questions of spirituality and the integrity of the individual to the priests and philosophers (Sheper-Hughes and Lock 1987). (The same questions, by the way, kept many other societies from attempting any type of surgical intervention into the body’s integrity.)

The philosophical links between the seventeenth-century metaphor of the body-as-machine and the core value system current in the United States today are to be found in the Greek Aristotelian tradition that formed a developmental stimulus for both modern science and modern religion. Returned to Europe through renewed trade with the Arab world in the twelfth and thirteenth centuries, Aristotelian precepts
were thoroughly studied and eagerly incorporated by religious thinkers such as Thomas Aquinas, and by early scientists like Galileo, creating a hegemony of opinion about the superiority of the male in both the scientific and religious thought of post-medieval Europe. From this hegemony we moderns have inherited a pervasive legacy of symbolic thinking—a legacy of which we are largely unaware. In *De Generatione Animalium* (II, 3) Aristotle wrote:

When [semen] has entered the uterus it puts into form the corresponding secretion of the female and moves it with the same movement wherewith it is moved itself. For the female's contribution also is a secretion, and has all the parts in it potentially though none of them actually; it has in it potentially even those parts which differentiate the female from the male, for just as the young of mutilated parents are sometimes born mutilated and sometimes not, so also the young born of a female are sometimes female and sometimes male instead. For the female is, as it were, a mutilated male, and the catamenia [female secretions] are semen, only not pure; for there is only one thing they have not in them, the principle of soul. (Aristotle, in Ross 1955:194-195)

This definition of women as mutilated males permeates Aristotle's biological and philosophical work (see M. C. Horowitz in Lerner 1986: 207). Its wide dissemination by the late 1400s is amply evidenced in the following excerpt from the *Malleus Maleficarum* (*The Hammer of Witches*), a witchhunting manual so influential that it was used in witch trials throughout Europe for nearly three centuries after its publication in 1486:

All wickedness is but little to the wickedness of a woman.... [S]ince they are feeble both in mind and body, it is not surprising that they should come more under the spell of witchcraft.... But the natural reason is that she is more carnal than a man, as should be clear from her many carnal abominations. And it should be noted that there was a defect in the formation of the first woman, since she was formed from a bent rib, that is, a rib of the breast, which is bent as it were in a contrary direction to a man. And since through this defect she is an imperfect animal, she always deceives. (Kramer and Sprenger 1972:120-121)

In theory, the mechanistic model that provided the philosophical basis for the Scientific and Industrial Revolutions could have been inherently egalitarian—human bodies could have been metaphorized as equal in their mechanistic. But both the Protestant Reformation and the Scientific and Industrial Revolutions, which transformed so much of European society, left generally untouched this fundamental assump-

tion of the superiority of the male—an assumption whose conceptual hegemony in fact intensified as the Industrial Revolution progressed.¹

One way to re-metaphorize reality in mechanistic terms while still perpetuating the established male/female power relationship was simply to declare one normal and the other deviant in terms of the new model, thus undermining its potential for equalizing the sexes at the very beginning. So the men who established the idea of the body as a machine also firmly established the male body as the prototype of this machine. Insofar as it deviated from the male standard, the female body was regarded as abnormal, inherently defective, and dangerously under the influence of nature, which due to its unpredictability and its occasional monstrousities, was itself regarded as inherently defective and in need of constant manipulation by man (Merchant 1983:2; Reynolds 1991).

Thus, despite the acceptance of birth as mechanical like all other bodily processes, it was still viewed as inherently imperfect and untrustworthy. The demise of the midwife and the rise of the male-attended, mechanically manipulated birth followed close on the heels of the wide cultural acceptance of the metaphor of the body-as-machine in the West and the accompanying acceptance of the metaphor of the female body as a defective machine—a metaphor that eventually formed the philosophical foundation of modern obstetrics. Obstetrics was thereby enjoined from its beginnings to develop tools and technologies for the manipulation and improvement of the inherently defective and therefore anomalous and dangerous process of birth.

**THE TECHNOCRATIC MODEL OF BIRTH**

"But is the hospital necessary at all?" demanded a young woman of her obstetrician friend. "Why not bring the baby at home?"

"What would you do if your automobile broke down on a country road?" the doctor countered with another question.

"Try and fix it," said the modern chauffeuse.

"And if you couldn't?"

"Have it hauled to the nearest garage."

"Exactly. Where the trained mechanics and their necessary tools are," agreed the doctor. "It's the same
with the hospital. I can do my best work—and the best. we must have in medicine all the time—not in some cramped little apartment or private home, but where I have the proper facilities and trained helpers. If anything goes wrong, I have all known aids to meet your emergency."

—*The Century Illustrated Magazine*, February 1926

**Birth.** This is the complete expulsion or extraction from the mother of a fetus irrespective of whether the umbilical cord has been cut or the placenta is attached.

—Cunningham, MacDonald, and Gant, *Williams Obstetrics*

According to the technocratic model of birth,² the human body is a machine. The male body is metaphorized as a better machine than the female body, because in form and function it is more machine-like—more consistent and predictable, less subject to the vagaries of nature (i.e., more cultural and therefore "better"), and consequently less likely to break down. It is also straighter-lined. Technocratic reality is constructed on the premise of the straight line as inherently "good to think with"; the high cultural value attached to the straight line entails a concomitant devaluation of nonlinear reality (Lee 1980). The curves, dips, caves, and hollows of the female figure, in contrast to the more linear male figure, seem rather more evocative of nature’s rivers, hills, and valleys than of culture’s dams, bridges, and highways. Males, because they are the most machine-like, not only set the standard for the properly functioning body-machine, but also are thought best-equipped to handle its maintenance and repair.

Because of their extreme deviation from the male prototype, uniquely female anatomical features such as the uterus, ovaries, and breasts, and uniquely female biological processes such as menstruation, pregnancy, birth, and menopause are inherently subject to malfunction. In *The Woman in the Body*, Martin (1987:47–49) notes that the medical language used to describe ovarian egg production, menstruation, and menopause often speaks of “degeneration,” “decay,” and “failed production,” whereas that used to describe male sperm production speaks glowingly of its “remarkable,” “amazing” nature and its “sheer magnitude.” It is thus understandable that the woman in whose body such degenerative processes take place is often seen, under the technocratic model, as better off without them.

As a number of physicians and medical anthropologists and sociologists have pointed out, our medical system has done a thorough job of convincing women of the defectiveness and dangers inherent in their specifically female functions (Corea 1985a; Ehrenreich and English 1973a; Leavitt 1986; Mendelsohn 1981; Oakley 1984; Wertz and Wertz 1989). The hysterectomy is the most commonly performed unnecessary operation in the United States (one out of every three American women has a hysterectomy by the time she reaches menopause [Corea 1985a:287]), with the radical mastectomy in second place (Mendelsohn 1981). A common surgical expression states, “If ovaries were testicles, there’d be a lot fewer of them removed” (Nolen 1979:202). It has been a recurrent theme in American medicine that to remove a woman’s sexual organs is to restore her body to full health and greater potential for productive life. Paralleling this theme, most standard medical diagrams of various body systems—nervous, lymphatic, musculoskeletal, and so forth—depict the male body to illustrate the proper functioning of that system, whereas dysfunctional conditions like obesity are usually depicted with female bodies. In short, under the technocratic model the female body is viewed as an abnormal, unpredictable, and inherently defective machine:

Women are known to suffer at least some inconvenience during certain phases of the reproductive cycle, and often with considerable mental and physical distress. Woman’s awareness of her inherent disabilities is thought to create added mental and in turn physical changes in the total body response, and there result problems that concern the physician who must deal with them. (Abramson and Torghele 1961:223)

During pregnancy and birth, the unusual demands placed on the female body-machine render it constantly at risk of serious malfunction or total breakdown. This belief, the foundation of modern obstetrics, can be found behind the lines of much early obstetrical literature:

In order to acquire a more perfect idea of the art, [the male midwife] ought to perform with his own hands upon proper machines, contrived to convey a just notion of all the difficulties to be met within every kind of labor; by which means he will learn how to use the forceps and crotches with more dexterity, be accustomed to the turning of children, and consequently, be more capable of acquitting himself in troublesome cases. (Smellie 1756:44)

It is a common experience among obstetrical practitioners that there is an increasing gestational pathology and a more frequent call for art, in supple-
menting inefficient forces of nature in her effort to accomplish normal delivery. (Ritter 1919:531)

The 1985 issue of the prestigious New England Journal of Medicine includes an editorial on the potential advantages of universal prophylactic Cesarean section. The authors question whether, since birth is such a dangerous and traumatic process for both woman and child, the best obstetric care should perhaps come to include complete removal of the risks of “normal” labor and delivery. A more recent article in Female Patient asserts that natural childbirth is associated with “maternal death, infant death, and maternal tissue destruction. . . . Some practitioners are asking whether an even higher Cesarean rate may be appropriate. Should we not offer the ultimate in pelvic and birth-canal protection to the mothers?” (Beecham 1989).

Dr. Beecham’s words are eerily reminiscent of those of one of the most famous founding fathers of modern obstetrics, Joseph B. DeLee, whose well-known pitchfork analogy is still occasionally heard in contemporary medical training (O’Banion 1987:41):

Labor has been called, and still is believed by many to be, a normal function. It always strikes physicians as well as laymen as bizarre, to call labor an abnormal function, a disease, and yet it is decidedly a pathologic process. Everything, of course, depends on what we define as normal. If a woman falls on a pitchfork, and drives the handle through her perineum, we call that pathologic—abnormal, but if a large baby is driven through the pelvic floor, we say that is natural, and therefore normal. If a baby were to have his head caught in a door very lightly, but enough to cause cerebral hemorrhage, we would say that is definitely pathologic, but when a baby’s head is crushed against a tight pelvic floor, and a hemorrhage in the brain kills it, we call this normal, at least we say that the function is normal, not pathogenic. (DeLee 1920:39-40)

Although most modern obstetrical texts do give lip service to pregnancy as a natural and intrinsically healthy process, this is usually done in a paragraph or two. For example, the eighteenth edition of Williams Obstetrics, the preeminent text in the field, states:

The expectant mother has been commonly treated as if she were seriously ill, even when she was quite healthy. All too frequently she has been forced to conform to a common pathway of care that stripped her of most of her individuality and much of her dignity. . . . Too often the expectant mother has felt that her fate and the fate of her baby were dependent not so much on skilled personnel but upon an electronic cabinet that appeared to possess some great power that prevailed above all others. (Cunningham et al. 1989:6)

Meanwhile, most of the next nine hundred pages are devoted to a detailed discussion of everything that can possibly go wrong and of how to use the “electronic cabinet” to solve these problems. (For a detailed cultural analysis of Williams Obstetrics, see Hahn 1987.) For the vast majority of modern obstetricians, technology and birth are inseparable:

I’m totally dependent on fetal monitors, ‘cause they’re great! They free you to do a lot of other things. I couldn’t practice modern obstetrics without them. I couldn’t sit over there with a woman in labor with my hand on her belly, and be in here seeing twenty to thirty patients a day. You couldn’t see the volume of people, you couldn’t treat people. I’d say that in the twenty years that I’ve been in practice, what we do today is 90 percent different than what we did. We have laparoscopes, we have ultrasound. We couldn’t stop labor in those days—we stop labor with tocolytic drugs today. At least 90 percent of the things I do now weren’t part of my training. (Male obstetrician, age 53)

A younger colleague emphasizes that “anybody in obstetrics who shows a human interest in patients is not respected. What is respected is interest in machines.”

The rising science of obstetrics ultimately reached this position by adopting early on the model of the assembly-line production of goods—the template by which most of the technological wonders of modern society were being produced, as its base metaphor for hospital birth. In accordance with this metaphor (and in response to a variety of related economic incentives), in the hospital a woman’s reproductive tract is treated like a birthing machine by skilled technicians working under semi-flexible timetables to meet production and quality-control demands:

We shave ’em, we prep ’em, we hook ’em up to the IV and administer sedation. We deliver the baby, it goes to the nursery and the mother goes to her room. There’s no room for niceties around here. We just move ’em right on through. It’s hard not to see it like an assembly line. (Fourth-year resident)

The hospital is a highly sophisticated technocratic factory; the more technology the hospital has to offer, the better it is considered to be. As an institution, it constitutes a more significant social unit than the individual or the family, so the birth process should conform more to institutional than personal needs. As one physician put it, “There was a set, established routine for doing things, and the laboring woman was someone you worked around, rather than with.”

This tenet of the technocratic model—that the institution is a more significant social unit than the mother—will not be found in obstetrical
texts, yet is taught by example after example of the interactional patterns of hospital births (Jordan 1983; Scully 1980; Shaw 1974). For example, Jordan describes how pitocin (a synthetic hormone used to speed labor) is often administered in the hospital when the medical delivery-room team shows up gowned and gloved and ready for action, yet the woman’s labor slows down. The team members stand around awkwardly until someone finally says, “Let’s get this show on the road!” (1983:44). (Over 80 percent of the hospital-birthers in my study had their labors augmented with pitocin.)

Of course, the question of individuality and variability among physicians arises throughout this delineation of the hegemonic technocratic paradigm. Whereas Lock (1985), Hahn (1985), Helman (1985) and others have shown that individual physicians do develop individual working models for female processes during the course of their clinical experience, I suggest that at least in the case of obstetrics, such individual models are subject to the pervasive philosophical devaluation of the female body-machine. Although the twelve obstetricians I interviewed for Chapter 7 of this book certainly exhibited individual variations in their beliefs and practices, a strong technocratic orientation was easily detectable in all but three.

According to the technocratic model, the uterus is an involuntary muscle that starts labor in response to mechanical hormonal signals:

The final event in initiating a uterine contraction is an increase in the intracellular concentration of ionic calcium (Ca2+) in myometrial smooth muscle cells in response to the actions of a uterotonin. The ATP-energy-dependent translocation of calcium to a stored form in the sarcoplasmic reticulum is associated with uterine relaxation. . . . Uterine contractions are involuntary and . . . independent of extra-uterine control (except that labor-slowing can be caused by administration of epidural anesthesia too early in labor). (Cunningham et al. 1989:210–214)

Given the involuntary nature of contractions, the mother’s personal participation in the birth process is not necessary, but is to be welcomed to the extent that she complies with institutional needs and facilitates the necessary interventions. States Williams, “The proper psychological management of the pregnant woman throughout pregnancy and labor is a valuable basic tranquilizer” (Cunningham et al. 1989:328). Should “proper psychological management” prove insufficient for the naturally caused pain of labor, a variety of pain-relieving drugs, all of which reach the baby within minutes of administration, will (usually) be read-

ily proffered. But when the pain the woman feels is caused by obstetrical procedures, she is told she must bear it “for the baby’s sake.”

Another basic tenet of the technocratic model of birth holds that some degree of intervention is necessary in all births. (For example, episiotomies—a surgical incision of the vagina at the moment of birth—are performed on over 90 percent of all first-time mothers who birth in U.S. hospitals [Inch 1984:126].) Birth is thus a technocratic service that obstetrics supplies to society; the doctor delivers the baby to society. (Traditionally, he hands the baby to the nurse immediately after birth, not to the mother.) If the product is perfect, the responsibility and the credit are his; if flawed, the responsibility will transfer to another technical specialist up or down the assembly line; any blame will be categorically assigned to the inherent defectiveness of the mother’s birthing machine:

Yesterday on rounds I saw a baby with a cut on its face and the mother said, “My uterus was so thinned that when they cut into it for the section, the baby’s face got cut.” The patient is always blamed in medicine. The doctors don’t make mistakes. “Your uterus is too thin,” not “We cut too deeply.” “We had to take the baby,” (meaning forceps or Cesarean), instead of “the medicine we gave you interfered with your ability to give birth.” (Harrison 1982:174)

The most desirable end product of the birth process is the new social member, the baby; the new mother is a secondary by-product:

It was what we were all trained to always go after—the perfect baby. That’s what we were trained to produce. The quality of the mother’s experience—we rarely thought about that. Everything we did was to get that perfect baby. (male obstetrician, age 38)

This focus on the production of the “perfect baby” is a fairly recent development, a direct result of the combination of the technocratic emphasis on the baby-as-product with the new technologies available to assess fetal quality. Amnioncetesis, ultrasonography, “ante partum fetal heart ‘stress’ and ‘non-stress’ tests . . . and intrapartum surveillance of fetal heart action, uterine contractions, and physiochemical properties of fetal blood” (Pritchard and MacDonald 1980:329) are but a few of these new technologies:

The number of tools the obstetrician can employ to address the needs of the fetus increases each year. We are of the view that this is the most exciting of times to be an obstetrician. Who would have dreamed, even a few years ago, that we could serve the fetus as physician? (Pritchard and MacDonald, 1980:vii)
This statement from the sixteenth edition of *Williams* reflects an increasing insistence in obstetrics that, from conception on, the fetus is a being separate from its mother and can grow and develop without the mother’s will or involvement—"its" best interests are often antagonistic to hers. Thus the labor process necessarily entails close monitoring of the mother by procedures that enact the underlying view that the female body-machine is inherently defective and generally incapable of producing perfect babies without technological assistance from professionals, even when such monitoring causes the mother considerable stress and increased pain. (This technocratic premise of maternal-fetal antagonism reaches full expression in several recent cases of Cesareans performed by court order against the mother’s will ([Jordan and Irwin 1989] and in the escalating national political debate on maternal versus fetal rights.)

Such profound conceptual separation of mother and child both mirrors and extends the fundamental Cartesian doctrine of mind-body separation. This separation is given tangible expression after birth as well, when the baby is placed in the nursery for four hours of "observation" before being returned to the mother; in this way, society symbolically demonstrates ownership of its product. The mother’s womb is replaced, not by her arms but by the plastic womb of culture. As Shaw points out, this separation is intensified after birth by the assignment of a separate doctor, the pediatrician, to the child (1974:94). This idea of the baby as separate, as the product of a mechanical process, is a very important metaphor for women, because it implies that men can ultimately become the producers of that product—and indeed it is in that direction that reproductive technologies are headed (see Chapter 8).

Although the early Cartesian model of reality offered man unprece
dented power to control his environment, there were restrictions on this power, as under this model humans were limited by the divinely imposed—albeit strictly mechanical—limitations of the natural and cosmic worlds. In today’s world, these restrictions have been conceptually—and significantly—removed. Modern technology has "progressed" far beyond what was imaginable to the seventeenth-century philosophers who originated the mechanical model. There is an unprecedented promise inherent in today’s technology—a recent development peculiar to this century and formative of the next. To the earlier philosophers, the phenomenon of death was the inevitable fate of every human body-machine, and although the birth process came to be seen as mechani-
cal, the phenomenon of conception remained a mystery beyond human manipulation or control. But for our generation, modern technology holds the twin promises of our actual creation of life and our actual transcendence of both death and the planetary bounds of nature. Cryogenic suspension, test-tube conception, and space travel are physiological realities today, whispering the promise of ultimate transcendence through technology tomorrow.

Our increasing cultural faith in this promise holds special significance for birth. As the process that perpetuates society through generating new members and transmitting key cultural values, birth must intensively reflect those values. Thus, as this technocratic model continues to evolve, the technocratic treatment of birth will continue to intensify. The very real and ongoing discrepancies between the technocratic paradigm and objective reality will increasingly necessitate obstetrical resolution of certain conceptual anomalies inherent in our growing dependence on the promises of technology.

**THE ROLE OF AMERICAN OBSTETRICS IN THE RESOLUTION OF CULTURAL ANOMALY**

The solidity of everyday reality stems from the shoring up and replastering we constantly give it as we talk about the world and inspect it for the materials that talk requires. Beneath our busy scaffolding there may be nothing at all.

—Michael Moerman, *Talking Culture*

As noted earlier, most viable human cultures depend on a high degree of cohesiveness and consistency in the cognitive categories through which their members are socialized to make sense of the world around them. Yet any such conceptual system, no matter how carefully worked out, is bound to confront experiences in nature and in the supernatural that do not comfortably fit its categories nor support its premises ([Douglas 1966, 1973]). Cultures like that of the United States, whose conceptual systems are founded on principles of man’s superiority to nature, are especially challenged to develop successful ways of dealing with powerful natural and supernatural experiences that demonstrate the inadequacy of their belief systems. Birth is one such experience. The unique constraints on reality inherent in our system of core values and beliefs ensure that the natural process of birth will confront our society
with a thorny set of philosophical problems concerning its relationship to the individuals who comprise it, and to the natural and cosmic worlds that sustain and encompass it.

I have been able to identify at least eight major conceptual and procedural dilemmas with which the natural birth process confronts American society. I choose to emphasize the label “dilemmas” (in the sense of “a problem seemingly incapable of a satisfactory solution” [Webster’s 1979:317]), instead of “oppositions” or “anomalies”; I present these dilemmas below in “how-to” terms in order to emphasize that they are conceptual problems whose successful resolution depends on concrete, operational, “how-to-proceed” plans for action in the face of a potentially paralyzing paradox. These dilemmas may be summarized as follows:

1. Our society is conceptually grounded in the technocratic model of reality and thus has a vested interest in maintaining the conceptual validity of that model. Yet the natural process of birth appears to refute the technocratic model because the birth process confronts us with graphic evidence that babies come from women and nature, not from technology and culture. This dilemma can be stated as follows: how to make the natural process of birth appear to confirm, instead of refute, the technocratic model?

2. Our culture has a strong need to feel that it is in control of nature and its own future, and yet the birth process, on which the future of our society (still) depends, in many fundamental ways cannot be predicted or controlled. So the dilemma becomes, how to create a sense of cultural control over birth, a natural process resistant to such control?

3. The birthing of a child constitutes one of the most profoundly transformative and uniquely individual experiences a woman will go through in her life. Across cultures, people seek ways to generalize such experiences—that is, to turn them into cultural rites of passage in order to make it appear that the transformation is effected, not by nature, but by the culture itself, and to utilize the transformative period to inculcate the individual with basic cultural beliefs and values through ritual. So the dilemma is, how to generalize an individual transformation—that is, how to turn the natural birth experience which, left unshaped by ritual, would remain a purely individual transformation, into a cultural rite of passage?

4. Rites of passage entail a period of liminality (Turner 1979) in which the initiate is considered dangerous to society, because he or she is living in a transitional realm between social categories which is officially not supposed to exist; the fact that it does exist threatens the entire category system of the culture. Yet this danger, if properly handled, can be culturally revitalizing, as it carries the tantalizing possibility of cultural change. Although too much contact with this danger can be culturally disruptive, some is essential for combating the constant dangers of entropy which threaten to undermine those societies who never flirt with the unknown. So the problem becomes, how to “fence in” the dangers associated with the liminal period in birth, while at the same time allowing controlled access to their revitalizing power?

5. Babies are natural beings, born essentially culture-less. Yet people universally seem to insist that being culture-full is what makes us human. How to enculturate a noncultural baby?

6. The majority of human cultures are strongly patriarchal, ours included. Yet birth, upon which men must totally depend for their own and their children’s existence, is a purely female phenomenon. As such, birth poses a major conceptual threat to male dominance, as male dependence upon females for birth would seem to demand that women be honored and worshiped as the goddesses of their society’s perpetuation. The dilemma here: how to make birth, a powerfully female phenomenon, appear to sanction patriarchy?

7. The technology and the institutions in which we place our faith for the perpetuation of our culture are inherently asexual and impersonal. The birth process, upon which the perpetuation of our culture depends, is inherently sexual and intimate. Thus its intimacy and sexuality constitute yet another arena in which birth threatens to undermine the conceptual hegemony of the technocratic model. So those responsible for the cultural management of birth in the United States have had to devise culturally appropriate ways to remove the sexuality from the sexual process of birth.

8. Our society remains strongly patriarchal, yet pays increasing lip service to the ideal of equality. Since growing numbers of women espouse this ideal, our culture will not survive in its present form unless these women can also be made to internalize the basic tenets of the technocratic model of reality. This dilemma is one of the most intriguing: how to get women, in a culture that purports to hold gender equality as an ideal, to accept a belief system that inherently denigrates them?

Some of the above dilemmas are universal problems presented by the birth process to all human societies; others are specific to American cul-
ture. Each contains within it a fundamental paradox, an opposition that
must be culturally reconciled lest the anomaly of its existence under-
mine the fragile conceptual framework in terms of which our society
understands itself in relation to the universe. That conceptual anomalies
do in fact have such power is abundantly illustrated throughout history:
every new religion has promoted itself by daring to spotlight the con-
cceptual discrepancies in the belief system that went before it (Feeley-
Harnik 1981). Irreconcilable oppositions may be tolerable as long as
no one points the finger at them, but once they are put in front of the
public eye, they can and often do topple governments.

Thus any society's ability to perpetuate its belief system depends
greatly upon offering its members a variety of ways to mediate those
conceptual oppositions that constantly threaten to tear it apart. As we
have seen, the cultural responsibility for mediating these eight dilemmas
in which birth and American culture are fundamentally opposed lies
with our obstetrical profession. The response of the science of obstetrics
to this cultural challenge has been: (1) to work out carefully a strong
and consistent philosophical rationale for the management of birth
which interprets birth specifically and exclusively in terms of the tech-
nocratic model; and (2) to develop a set of ritual procedures that could
be uniformly applied to the natural process of human reproduction in
order to transform it conceptually into a cultural process of human pro-
duction, similar to the production of any other technocratic artifact. We
will now turn to specific consideration of each dilemma and of how it
is successfully (more or less) resolved by the rituals developed by Amer-
ican obstetrics.

THE CONCEPTUAL AND PROCEDURAL DILEMMAS PRESENTED
TO AMERICAN SOCIETY BY THE NATURAL PROCESS OF BIRTH
AND RESOLVED BY OBSTETRICAL RITUALS

In all cases, the immediate attempt of the human
organism in the face of an unknown stimulus is to or-
ganize it within a known framework.
—Eugene d'Aquili, "The Neurobiology of
Myth and Ritual"

First Dilemma—Natural versus Technocratic Reality: How to Make
the Natural Process of Birth Appear to Confirm the Technocratic
Model In developing its belief system, every culture must make the

basic conceptual move of separating itself from the natural world that
spawned it, of deciding and then delineating where one ends and the
other begins. Yet because it is only through nature that new members
can enter culture, childbirth calls into question any conceptual bound-
aries a culture tries to establish between itself and nature. Such a visible
and constant reminder that we can never really separate ourselves from
the natural world presents an especially serious challenge to our cul-
ture, for it threatens to undermine the promise of ultimate transcen-
dence inherent in our technocratic model.

A common cultural response to this type of conceptual threat is to
wall it off from the mainstream of social life by creating special cate-
gories of "tabu," which are often reflected in actual social spaces spec-
ifically constructed to contain the conceptual danger (Douglas 1966).
Another common cultural coping technique is to then defuse the con-
ceptual bomb through the careful and consistent performance of rituals
designed to mold the inconsistent phenomenon into apparent compli-
cance with society's official belief system (Vogt 1976).

Our culture, like many others, has availed itself of both of these
techniques in its struggle to cope with the conceptual threat presented
by natural birth. We have tabued birth, removing it from everyday life
by walling it off in hospitals (institutions specifically designed to isolate
most of the boundary-threatening reminders of our subordination to
nature presented to our culture by the human body, including disease
and death, as well as birth [Kearl 1989; Miner 1973]). Finally, we have
defused birth's explosive potential for conceptual upset by processing
it through rituals specifically designed to eliminate the inconsistency be-
tween the birth process and our technocratic belief system by making
birth appear to confirm, instead of challenge, that belief system, as
Chapter 3 will investigate in detail.

Second Dilemma: How to Create a Sense of Cultural Control over
Birth, a Natural Process Resistant to Such Control Underneath our
stubborn insistence on the mechanistic nature of birth hide the truths
of its natural unpredictability and spiritual unknowability. Because rit-
ual mediates between cognition and chaos by appearing to restructure
reality, humans in all cultures have chosen it as the most effective means
of overcoming their fear of the mystery and unpredictability of the nat-
ural and cosmic realms. As discussed in the Introduction, to precisely
perform a series of rituals is to feel oneself locked onto a set of cognitive
gears which, once set in motion, will inevitably carry one all the way
through the perceived danger to a safe and predictable end. Just so do obstetrical rituals serve physicians and nurses. These routines psychologically enable medical personnel to attend births; without their routines, birth attendants would feel powerless in front of the power of nature, conceptually adrift in a category-less sea of uncontrolable and uninterpretable experience (see Chapter 7). (Said one obstetrician, "I could never attend a home birth. I wouldn't know what to do.") But with their routines, medical personnel are empowered, physically and psychologically, to (1) define and categorize the events of labor and birth that confront them, and (2) act confidently in terms of those definitions to impose cultural order on inchoate nature, as is indicated in the following quote from Williams:

Except for cutting the umbilical cord, the episiotomy is the most common operation in obstetrics. The reasons for its popularity among obstetricians are clear. It substitutes a straightforward, neat surgical incision for the ragged laceration that otherwise frequently results. It is easier to repair and heals better than a tear. It spares the fetal head the necessity of serving as a battering ram against perineal obstruction...[which] may cause intracranial injury. Episiotomy shortens the second stage of labor. (Pritchard and MacDonald 1980:430)

As obstetricians began to take on the cultural responsibility for birth, their own belief in birth's inherent danger made essential the development of rituals they could rely on to give them the courage to face daily the challenge nature presents. Thus the performance of obstetrical rituals themselves had to take on the predictable pattern of a mechanical process. From the prep to the episiotomy, these procedures had to serve for birth attendants as the cranking gears that would mechanically and inevitably carry the birth process right on through the perceived danger to a safe and predictable end.

The same kind of psychological reassurance is sought by many birthing women who must individually face the same unknowns. Whether these women are traumatized or empowered by obstetrical rituals (see Chapter 5), these rituals usually provide at least a sense of certainty and security to the women that their babies will get born, and that neither they nor their babies will die. But they are also, most reassuringly, shown in most cases that a natural process perceived as terrifying and uncontrollable can be controlled and rendered conceptually safe when its course is mechanistically channeled into predictable pathways:

I've never been able to understand women who want to watch the birthing process in a mirror—I'd rather see the finished product than the manufactur-

ing process. [I had a friend who delivered at home, everything was fine, but] I am too practical and too pragmatic. I want to be near somebody who can fix it if something's wrong. I don't want to bleed to death being a hero. (Joanne Moorehouse)

Third Dilemma: How to Generalize an Individual Transformation
This third conceptual dilemma presented by the naturally transformative birth process is one faced by all human cultures at various points in the human life cycle: how to generalize an individual transformation. Such generalization is necessary to ensure conformity with the official social belief system; otherwise, unchanneled individual transformative experiences might (and often do) challenge the dominant belief system. Of course, most societies resolve this dilemma by routing individual transformations through an established cultural channel—the generalized process known as a rite of passage.

More elaborate than any heretofore known in the "primitive" world, the obstetrical procedures through which American birth is channeled carry and communicate cultural meaning far beyond their ostensibly instrumental ends. In so doing, they not only transform individual birth transitions into cultural rites of passage, but also resolve another potentially worrisome dilemma peculiar to a society that insists on appearing as rational, scientific, and nonritualistic as possible: how to make birth into a rite of passage that does what it is supposed to do (transform the initiates through inculcating them with core social values and beliefs) without looking ritualistic at all.

Moore and Myerhoff point out that unusually extensive elaboration of ritual is most likely to occur when the ideological system enacted by a series of rituals is not explicit, "precisely because more presentation and persuasion, more communication of information is needed when ideology is scanty or fragmentary" (1977:11). Unlike religious doctrines that are explicitly spelled out, the technocratic core value system of our culture, although it pervades our experience in countless ways, is below the level of consciousness for most of us. The enormous variety of more explicit religious, philosophical, and ethnic core value and belief systems in this country necessitates special efforts on the part of the representatives of society-at-large to preserve and to perpetuate its dominant core value system. Thus the largest social institutions founded on the principles of that system, which can be counted on to touch the lives of the vast majority of American citizens, become primary socializing agents for the inculcation of mainstream American beliefs and
values into young citizens, beginning with their birth in hospitals and continuing throughout their requisite years in schools. Even more profound indoctrination of society's core values can be accomplished with adults in special, intensely ritualized situations (which again, don't look to us like the rites of passage they really are) such as college football (Fiske 1975), Army basic training (Cafferata 1973; Eisenhart 1983), medical school and residency (Carver 1981; Davis-Floyd 1987a; Konner 1987; LeBaron 1981), and hospital birth.

Moreover, most becoming mothers, who are undergoing quite powerful and psychologically compelling physiological and cognitive transformations, feel a very real need for social acknowledgment and cultural alignment to give meaning and order to this often chaotic and bewildering experience (see Chapter 5). It is precisely these needs, of course, which officially conducted rites of passage are specifically designed to fulfill. In spite of the uniqueness of each birth and each woman who gives birth, standardized obstetrical procedures give this, the ultimately transformational process, the reassuring appearance of sameness and conformity to the socially dominant reality model.

Fourth Dilemma: How to "Fence In" the Dangers Associated with the Liminal Period in Birth, while at the Same Time Allowing Controlled Access to Their Revitalizing Power A fundamental paradox presented by most initiatory rites of passage to the cultures that design them lies in their official recognition and indeed, publicizing, of officially nonexistent transitional stages of being. The category systems of most cultures allow individuals to be either "here" or "there," but not in between, for the existence of in-between calls into question the absoluteness of "here" and "there" (Douglas 1966). It is a well-documented feature of rites of passage that those in the liminal phase must be conceptually, as well as physically, isolated from the rest of society (Chapple and Coon 1942; Turner 1969), as their existence poses a threat to the entire category system of that society. Yet it is also well documented that this very threat can be of tremendous benefit to society, for in the process of the symbolic inversion of a culture's category system lies the potential for the expansion, growth, and change of that category system, and thus of the culture itself. This brings us to the fourth conceptual dilemma presented to American society by birth: how to "fence in" the dangers associated with the liminal period in birth, while at the same time allowing controlled access to their revitalizing power.

Roger Abrahams (1973) points out that a tremendous amount of energy is generated in the profound symbolic inversion of a culture's deepest beliefs that is characteristic of the liminal period in initiation rites. He states that although this energy may remain unfocused for the initiates, who often do not know exactly where they are or exactly what is happening to them, it is focused and thus usable by the elders conducting the rite. Therefore, Abrahams suggests, initiatory rites of passage may be carried out as much for the benefit of these elders as for the initiates (1973:12, 39b). Brigitte Jordan illustrates the symbolic process through which the focusing of the energy generated by the birth process away from the mother and toward the medical personnel who attend her takes place:

In hospital deliveries, responsibility and credit are clearly the physician's. This becomes visible in the handshake and "thank-you" that resident and intern (or intern and medical student) exchange after birth. "Good work" is a compliment to a physician by somebody qualified to judge, namely another physician. Typically, nobody thanks the woman. In the common view, she has been delivered rather than given birth. (1983:50)

This interational pattern of focusing the creative energy of birth onto the physician works to revitalize and perpetuate the medical system in its present form, and thus our core value system is perpetuated as well. Many women attempt to reclaim this revitalizing birth energy through subsequent, self-empowering births in the hospital and at home:

I sat there... and then I realized—Hey, I did it! I wanted to have the baby at home and I read the books to figure out how and then I really did it! It worked! I didn't have to go to the hospital at all; the doctors didn't touch me! Then I realized that if I could do that great thing, perhaps I could do other things as well. (Ashford 1984:80)

The cultural significance of such efforts at refocusing this revitalizing birth energy onto women themselves will be discussed in Chapter 9.

Fifth Dilemma: How to Enculturate a Noncultural Baby Although birth is certainly a passage for the baby from the womb to the world, it is not a rite of passage for the baby unless, as for the mother, specific cultural actions are taken to make it so. A fifth conceptual problem with which the birth process confronts our culture, and indeed every culture, is how to find an effective means of removing new members from the noncultural realm of the womb and placing them in the cultural realm of society; in other words, how to enculturate a noncultural baby.

In the past, before the mechanistic model of the universe had di-
minished the hegemony of religion, the symbolic (in the eyes of the older members of society) enculturation of new members of society was accomplished through the ritual of baptism. Today, we do it through the rituals of hospital birth. American babies are baptized by inspection, testing, bathing, weighing, and wrapping in a technocratic process that extends even to the alteration of their internal physiology through the administration of a Vitamin K shot and antibiotic eye drops.

Of course, we have chosen to develop medical instead of religious rituals to fulfill the universal social need for symbolic enculturation of the newborn because we have taken ultimate responsibility for the human body, for the perpetuation of society, and for the performance of any necessary mediation between society and the supernatural which concerns the body, away from the churches and given it to our medical system. So medical procedures replace religious ones, fulfilling many of the same purposes and satisfying many of the same cultural and psychological needs. Moreover, whereas most cultures seem content to use their baptismal rituals simply to make the baby "human," we in our arrogance—or fear—use our entire set of birth rituals to actually make it appear that our babies are cultural products.

Sixth Dilemma: How to Make Birth, a Powerfully Female Phenomenon, Appear to Sanction Patriarchy In Renaissance Europe, birth was an exclusively female phenomenon, but the baby was considered impure and unable to go to heaven until baptized by a male priest. Moreover, birth was considered so impure that afterward the mother was required to be ritually cleansed in a church—a practice known as "churching" (Arx 1978; Reynolds 1983). Thus the powerfully female phenomenon of birth was channeled, albeit after the fact, into sanctioning patriarchy after all. Such religious rituals clearly delineated the high cultural value placed on the male realm and the fundamental cultural devaluation of the female realm characteristic of Renaissance Europe.

If, as I and others argue (Arditi et al. 1985; Corea 1985b; Hertz 1960; Rothman 1982, 1989), the basic thrust of our technology still is toward the right hand of maleness, then the birth process confronts American society with the same conceptual challenge faced by Renaissance society: how to make birth, a powerfully female phenomenon, appear to sanction patriarchy. For in spite of its technology and its cleavage to a patriarchal system of social life, our society's perpetuation still depends on women. The conceptual tension inherent in this paradox is also neatly dissolved by the rituals of hospital birth, as these procedures not only make birth appear to be a mechanistic process by which a baby is produced, but also make the (mostly male) "managers" of that process appear to be the producers.4

Seventh Dilemma: How to Remove the Sexuality from the Sexual Process of Birth Of course, if babies are to be technologically instead of naturally produced, and if their production is going to sanction patriarchy instead of equality, then sexuality is going to become an anomaly in relation to birth, which brings us to our seventh dilemma: how to remove the sexuality from the sexual process of birth.

Women's sexuality, thought in the Renaissance period to be a devil-inspired temptation to righteous males (Kramer and Sprenger 1972), has long been a problematic issue for Western society (e.g., Freud 1938; Jones 1985). Today, sexuality remains a potent conceptual threat to the creative powers of technology, and female sexuality remains the chief reminder of that threat.

Our society has developed no more effective response to this conceptual dilemma than obstetrical rituals. As Sheila Kitzinger (1972) and Niles Newton (1973, 1977) stress, birth is a normal female sexual function (the fact that I feel the need to reference authorities on this point itself speaks eloquently for the desexualization of birth in our times), as is evident in Lynda Coleman's description of her labor:

Labor for me was a total turn-on. Yes, there was pain—a lot of pain, and the most effective relief for it was stimulation of my clitoris. Larry rubbed my breasts and my clitoris and kissed me deeply and passionately for hours until the baby came. And when he had to go out of the room, I masturbated myself until he came back. I had lots of orgasms. They seemed to flow with the contractions. Even when I was pushing I wanted clitoral stimulation. It was the sexiest birth ever! And I loved every minute of it. I was completely alive and alone—turned on in every cell of my body. I felt that the totality of Larry and me—the fullness of everything we were individually and together—was giving birth to our child.

Yet it is precisely female sexual functions that the technocratic model finds threatening and labels both "defective" and "tabu." So effective are hospital routines at masking the intense sexuality of birth that most women today are not even aware of birth's sexual nature. For example, stimulation of the laboring woman's breasts and clitoris has been proven to be extremely effective in strengthening labor (Field 1985), yet is utterly taboo in most hospitals, where the synthetic hormone pitocin is administered intravenously instead. The routine performance of
the episiotomy is another excellent example of the desexualization of birth in the hospital: an effective alternative recommended by many midwives is perineal massage with warm olive oil, far too overtly sexual a procedure for most obstetricians. Through pitocin and episiotomies, sterile gowns and sheets, enemas and pubic shaves, anesthesia and orange antiseptic, the intense and potentially ecstatic sexuality of birth is consistently and effectively masked.

That this masking was no historical accident is revealed in Mary Poovey’s (1986) article on the introduction of anesthesia in obstetrics, in which she graphically describes the emergent medical profession’s fear of female sexuality in childbirth. For example, Poovey quotes W. Tyler Smith, an eminent British obstetrician of the mid-nineteenth century, as he discusses the use of ether to remove the pain of labor:

In one of the cases observed by Baron Dubois, the woman drew an attendant toward her to kiss, as she was lapsing into insensibility, and this woman afterwards confessed to dreaming of coitus with her husband while she lay etherized... In ungravid women, rendered insensible for the performance of surgical operations, erotic gesticulations have occasionally been observed, and in one case, in which enlarged nymphae were removed, the woman went unconsiously through the movements attendant on the sexual orgasm, in the presence of numerous bystanders. (Smith 1847:377, quoted in Poovey 1986:142)

Commenting on Poovey’s article, Laura O’Banion notes the horror that the idea of childbirth as a primal sexual experience induced for the early obstetrician—“since it was supposed that only the penis (or an analogue thereof) was capable of providing sexual satisfaction, the penis-analogue in childbirth must be—the child itself!” (1987:34). The nineteenth-century Dr. Smith, unable to imagine that women would wish to expose themselves to this possibility, wonders if the natural and “proper” function of pain might be to obliterate the underlying ecstasy that would be released if the pain were eliminated, and he therefore argues against the use of ether in labor:

May it not be, that in woman the physical pain neutralizes the sexual emotions, which would otherwise probably be present, but which would tend very much to alter our estimation of the modesty and retiringness proper to the sex... Chastity of feeling, and above all, emotional self-control, at a time when women are receiving such assistance as the accoucheur can render, are of far more importance than insensibility to pain. They would scarcely submit to the possibility of a sexual act in which their unborn offspring would take the part of excitor. (Smith 1847, quoted in Poovey 1986)

“Oh yes they would!” is the response, in 1988, of midwife Jeanine Parvati-Baker. Her description of her own experience reveals just how intense the sexuality of birth can be:

I feel the baby come down. The sensation is ecstatic. I had prepared somewhat for this being as painful as my last delivery had been. Yet this time the pulse of birth feels wonderful! I am building up to the birth climax after nine months of pleasurable foreplay. With one push the babe is in the canal. The next push brings him down, down into that space just before orgasm when we women know how God must have felt creating this planet.

The water supports my birth outlet. I feel connected to the mainland, to my source. These midwife hands know just what to do to support the crowning head, coming so fast. How glad I am for all those years of orgasms! Slow orgasms, fast ones, those which build and subside and peak again and again. That practice aids my baby’s gentle emergence so that he doesn’t spurt out too quickly. He comes, as do I.

Eighth Dilemma: How to Get Women, in a Culture that Pays Increasing Lip Service to the Ideal of Equality, to Accept a Belief System that Denigrates Them The eighth and final conceptual dilemma with which birth confronts American society constitutes a potential cultural bombshell: how to get women, in a culture that pays increasing lip service to the ideal of equality, to accept a belief system that denigrates them. As noted folklorist Richard Bauman once said, “Folklore is about the politics of culture.” For me personally, the decoding of the symbolic messages hidden behind the scientific guise of hospital routines has led to a chilling reminder of the twin political threats presented to women by our technocratic model of reality. On the one hand, this model deprives women of their innate uniqueness and power as birth-givers. On the other, it perpetuates our cultural belief in women’s innate physiological inferiority. And yet, because of the potential for egalitarianism inherent in technology, this model does contain certain conceptual advantages for women which, in the early part of this century, proved alluring enough for many women themselves to actively work for the cultural adoption of this model of birth, and which today offer to women the freedom from biological constraints which many increasingly desire.

The birth process in American culture is and always has been a matrix of gender differentiation. In the 1800s, when most women gave birth at home, motherhood was the central defining feature of womanhood, and women’s appropriate domain was the home. Early feminists eagerly sought technological hospital birth, in the hope that it would
Birth Messages

CHAPTER 3

The Technocratic Model

to be on an American woman. of the radical and values system on which our society is based is brought out by the intense of hospital birth, it is through these means, the full force serious exactly how the socialization is accomplished in an American society. Philosophy, when viewed in this context, reveals what is the direct result of this process of the primarily and indirectly more powerful elements of the total social system. In the absence of the system, if it is an ineffectual and ineffectual model, the consumer is presented with a dilemma of how to get women to reassert their own cultural image of the female body as a woman who is, in fact, the dominant group. The influence of the female body on the dominant culture is demonstrated in the physical body is an integrate of the society's own, if not in a manner consistent with the dominant cultural norms. However, of course, instead of leading to equality of the sexes through

"NORMAL BIRTH" STANDARDS PROCEDURES FOR..."