

# BREASTFEEDING

## Biocultural Perspectives

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## *Beauty and the Breast: The Cultural Context of Breastfeeding in the United States*

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"The giving of birth and nurturing of my baby empowered me as a woman in ways that I can't quite explain. All I know is that when I would sit up at night, nursing him, when all the house was quiet, I had an uncommon sense of being engaged in the single most important activity there is in life." (Anonymous respondent, Women's Committee of the American Studies Association, 1988)

"I could never be a woman 'cause I'd just stay home and play with my breasts all day." (Telemacher, 1991)

"So what is it about this small gland of postnatal nourishment that puts a great nation in a dither? Perhaps the problem has to do with generations of men who didn't get enough nipple when it really counted." (O'Brien, 1995)

### INTRODUCTION

Today, few people would argue that formula/bottle-feeding is superior, or even equivalent, to breastfeeding. The nutritional, immunological, and emotional benefits of breastfeeding are well documented, and a number of breastfeeding promotion programs have been established. However, breastfeeding continues to decline in most regions of the world, both in terms of percentages ever breastfeeding and duration of breastfeeding. Even in the United States, the trend of the 1970s and 1980s toward increased breastfeeding (mostly among well-educated,

middle- and upper-class women) peaked in 1984 at 59.7% breastfeeding in the hospital and 8.0% breastfeeding at 12 months. Hospital and 12-month figures declined from 1985 to 1990, when they were 51.5 and 6.2%, respectively. There are, however, reasons for optimism. In 1991 and 1992, breastfeeding rates in the hospital rose again, particularly among women enrolled in the Women, Infants, and Children Program (WIC) (Ross Labs Mothers' Survey, 1993). A high percentage of WIC participants are African American, Hispanic, and Asian, and of low socioeconomic status. These increases among WIC participants followed the 1991 release of \$8 million in funds authorized by Congress in 1990 for the promotion of breastfeeding by the WIC program. Also, in 1991, the U.S. Department of Health and Human Services defined a lengthy list of objectives for improving the health of people in the United States, known as the *Healthy People 2000 Report*. One of these objectives is to "increase to at least 75% the proportion of mothers who breastfeed their babies in the early post-partum period and to at least 50% the proportion who continue breastfeeding until their babies are five to six months old" (U.S. Public Health Service, 1991).

The decision of whether to bottle- or breastfeed is often presented in the literature as being primarily based on nutritional and economic issues. Breastfeeding promotion programs often focus on education, teaching about the nutritional and immunological superiority of breast milk over formula or powdered milk, especially in third world contexts. They may also discuss the contraceptive value of breastfeeding, or its relative economic benefits, since it is far cheaper to provide extra food to the nursing mother than to provide formula and extra medical care for her child. The focus of breastfeeding promotion campaigns is almost always the mothers, based on the assumption that women are free to make decisions about how to feed their children based upon personal knowledge and preference. Breastfeeding is promoted as the "simple and natural" infant feeding choice, which every woman would choose if only she were convinced of its nutritional and immunological superiority over bottle-feeding with formula, and would succeed if only she were given adequate encouragement and support.

In reality, breastfeeding is both a "simple and natural" process that flows from our human biological status as mammals, and a heavily *culturized* behavior that can be so modified by cultural perceptions away from a "natural process" as to be almost unrecognizable.<sup>1</sup> Recent cross-cultural studies have shown that breastfeeding behaviors and, indeed, the decision of whether or not to breastfeed initially, are always embedded within a wider cultural context. In addition to nutritional, immunological, contraceptive, and economic considerations, there are, in all

cultures, a number of factors and beliefs not directly related to breastfeeding, that nevertheless affect women's decisions about how to feed their children. Every cultural group holds beliefs about the primary function of women's breasts, and the proper separation of private and public domains: How are breasts defined? Are they defined as practical, useful parts of the body, similar to arms and legs? Are they viewed as functioning primarily for the purpose of feeding children? Or are breasts defined as sexual organs, functioning primarily to attract and keep male attention? How is breastfeeding defined? Is it defined as "something all women do, wherever they happen to be with their children"? Or is it viewed as an activity that should be kept private, an activity that is not acceptable in public contexts?

In some cultures, the primary function of the human breast as the physiological link between mother and child after birth has been overshadowed, or even denied, by the force of cultural beliefs assigning a sexual role to female mammary glands. In Western cultures in particular, the image of the female breast as an erotic sexual organ has become pervasive, to the extent that some people would even deny that the breast has any function in child rearing. The biological and psychological consequences for women and children living in these cultures are staggering. If we are to achieve the goals outlined in the *Healthy People 2000 Report*, breastfeeding promotion programs will need to address the wider cultural context of breastfeeding. In this chapter, I will focus on these issues, particularly as they affect women's decisions about breastfeeding in the United States.

### ALL GOD'S MAMMALS GOT BREASTS

I begin with a fundamental question: What are breasts for? Or, put another way, why do human females have breasts? Breasts are known technically as mammary glands. They give their name to the class Mammalia, the zoological class to which humans belong. Mammals are characterized by having a constant internal body temperature, hair or fur, a four-chambered heart, giving birth to live young instead of laying eggs, and nourishing their young for some time after birth through secretions of the mammary glands. Mammals, or "animals with mammary glands," first appear in the fossil record more than 65 million years ago. Humans belong to the taxonomic order Primates, which also includes prosimians such as lemurs and lorises, New World and Old World monkeys, and the Lesser and Great Apes. Compared to members of the other orders,

primates have longer periods of gestation and infant dependency, and longer life spans. Our closest primate relatives, chimpanzees and gorillas, nurse their offspring for 5 to 6 years (Goodall, 1986; Harvey and Clutton-Brock, 1985; Nishida, 1979; Stewart, 1988).

Humans, like all primates, belong to Ben Shaul's Group II category: mammals who remain in continuous contact with their offspring, such that the offspring can nurse "on demand," whenever they want (Ben Shaul, 1962). Human milk is relatively low in fat and protein and relatively high in carbohydrates, especially lactose, and it reflects our primate heritage, with infants that are born relatively undeveloped, nurse frequently, grow slowly, and do not need a high milk fat content for warmth (compared to pinnipeds, for example).

Why do women (and all female mammals) have breasts?<sup>22</sup> The breasts continue the nutritional and immunological functions of the placenta after the child is born. In addition, the process of breastfeeding involves the child in multisensory interactions with the mother. Prior to the last two generations in Western/industrialized countries (and still today in most of the world), breastfeeding was (and remains) absolutely critical for child survival itself. Even in Western/industrialized countries, breastfeeding is necessary for optimal child health and growth, from both nutritional and immunological perspectives. In addition, the tactile, olfactory, auditory, visual, and gustatory interactions between mother and child that take place during the breastfeeding process are required for proper physical, cognitive, and emotional development of the child. The Harlows' studies of infant rhesus monkeys who were offered two "mothers"—a wire model who gave milk and a cloth-covered model who did not—showed conclusively that the nutritional value of mother's milk was only one component of the mother-child relationship, from the perspective of the infant, who spent most of its time on the cloth mother (Harlow, 1958; Harlow and Harlow, 1969). In addition, carefully controlled studies of humans have consistently shown that breastfed children score better on standardized tests of mental development than formula-fed children, with children breastfed the longest showing the greatest achievements (Bauer, Ewald, Hoffman and Dubanoski, 1991; Lucas, Morley, Cole, Lister and Leeson-Payne, 1992; Morley, Cole, Powell and Lucas, 1988; Morrow-Tlucak, Houde and Ernhart, 1988; Rodgers, 1978; Rogan and Gladen, 1993; Taylor and Wadsworth, 1984; Temboury, Otero, Polanco and Arribas, 1994).

From the evolutionary perspective of the mother, breastfeeding her offspring maximizes the mother's reproductive success through three mechanisms. First, breastfeeding for several years maximizes the health and fitness of each of her children, promoting survival, proper growth, better short- and long-term health, and better cognitive development.

Second, breastfeeding precipitates the release of two hormones in the mother, oxytocin and prolactin. These hormones affect maternal feelings and behavior, leading to more appropriate child-promoting behaviors on the part of the mother, and strong feelings of acceptance and nurturance in the child (Argiolas and Gessa, 1991; Newton, 1978; Panksepp, 1992). Third, breastfeeding provides a natural child-spacing mechanism through the suppression of ovulation while the child is young and nursing intensively (see Ellison, Chapter 11, for a thorough review of the links between breastfeeding and human fertility), again promoting the survival and optimal development of the currently youngest offspring, and maximizing the mother's reproductive success over the course of her lifetime.

From the biological perspective, it is clear that human females have breasts for the primary purpose of nurturing their children. From the cultural perspective, however, breasts themselves, as well as the process of breastfeeding, can come to have other meanings. As the following examples from Mali, Sierra Leone, and Nepal show, beliefs about the links between breastfeeding and kinship, the need for economic liaisons with men, and the necessity of combining breastfeeding with work, are among the wide variety of factors that affect breastfeeding in non-Western contexts.

### THE WIDER CULTURAL CONTEXT OF BREASTFEEDING: THREE NON-WESTERN EXAMPLES

I have studied breastfeeding in Mali (West Africa) firsthand, and I have read the extensive literature on breastfeeding in other cultures as well. In Mali, as in most cultures around the world, breasts hold no sexual connotations for either men or women. Sexual behavior does not involve the breasts, which are perceived as existing for the sole purpose of feeding children. When I told my friends and informants in Mali about American attitudes toward women's breasts, especially sexual foreplay involving "mouth to breast contact" by adult men, they were either bemused or horrified, or both. In any case, they regarded it as unnatural, perverted behavior, and found it difficult to believe that men would become sexually aroused by women's breasts, or that women would find such activities pleasurable.

In Mali, where breasts have retained their primary biological function, women at home may wear no clothing above the waist, and in public contexts are able to breastfeed freely without anyone even noticing. In Mali, women breastfeed in the markets, on long treks to gather



firewood, on public transportation, and even at work in offices. In Mali, wherever one sees women, one sees breastfeeding women. The Bambara word for breast milk, *shin ji* (literally "breast water"), is used to refer not only to breast milk itself, but also to one's closest kin, those who not only share common parentage, but who share the more significant bond of having been nurtured at the breasts of the same woman.

In Mali, beliefs concerning kinship and biological relatedness are very influential. Malian women place a high value on the "kinship" bond that develops between a mother and her child as she breastfeeds. Nursing from the same woman likewise creates bonds of kinship between otherwise unrelated individuals. To not breastfeed would mean giving up the tenuous connection a mother has to her children in a strongly patrilineal society, and render the child unrelated to the mother. Thus, a decision not to breastfeed carries a significant social cost, as well as costs in terms of the health of both mother and child (Dettwyler, 1988). Many other societies share similar beliefs about the nature of breastfeeding and kinship (cf. Counts and Counts, 1983).

Caroline Bledsoe's work on the meaning of "tinned milk" among the Mende of Sierra Leone (West Africa) provides an entirely different perspective on breastfeeding versus bottle-feeding (Bledsoe, 1987). Among the Mende, women choose to use tinned milk to feed their children for reasons related to their economic dependence on men, and the traditional Mende postpartum sex taboo. In Mende culture, people believe that semen can contaminate the breast milk and make the child sick. This belief is widespread in West Africa, including Mali, and the "disease" caused by too early resumption of sexual activity has symptoms Western health workers would classify as "malnutrition" (Dettwyler, 1990).

Among the Mende, the semen of a man other than the child's father is thought to be especially harmful. Mende women, to prevent accusations of causing a child's illness from breast milk contaminated by semen, wean the child at a very young age and give tinned milk instead. Early weaning reduces the chance that malnutrition will be attributed to the mother's resumption of sexual activity with her husband or, particularly, with a boyfriend. In addition, male provisioning of tinned milk is interpreted as a public sign that a man acknowledges paternity, and serves to strengthen ties between father and child, and between mother and father (Bledsoe, 1987).

Some women wean their children onto tinned milk early because they recognize the contraceptive effect of breastfeeding, and want to decrease child spacing, and thus increase their fertility. For economic security, most women must ally themselves with a man; they do this partly through sexual relations. Thus, they give their child tinned milk so that

they will be free to establish or continue a sexual and economic bond with their husband or other adult male. When Mende women talk about the decision to breastfeed, or when to wean, their discussions are couched almost entirely in phrases referring to the resumption of sexual intercourse (see Treckel, 1989 for fascinating parallels between the Mende beliefs and the beliefs of men and women in colonial North America). Nutritional, immunological, and economic factors directly related to the cost of tinned milk were not particularly relevant for Mende women (Bledsoe, 1987).

The work of Catherine Panter-Brick in Nepal illustrates another recent trend in breastfeeding studies. Following in the tradition of Konner and Worthman's studies of the !Kung (1980) and Vitzthum's studies of Quechua nursing patterns (1986, 1988, 1989, 1994), Panter-Brick (1991) has conducted careful, longitudinal, observational studies of breastfeeding behavior among women belonging to two different castes in rural Nepal. Using a time-allocation method, she quantified nursing frequency and duration for infants and toddlers among Tamang agro-pastoralists, who travel extensively up and down mountains to cultivate their crops and herd their animals, and among Kami women, the wives of blacksmiths, who spend most of their time working in and around their homes.

Tamang children travel with their mothers, and are nursed whenever their demands coincide with their mothers' ability to stop work temporarily. Mothers and children are often away from the home where supplementary foods might be available, thus Tamang mothers rely more heavily on breast milk, and wean their children at a much later age (up to 35 months) compared to Kami mothers (up to 25 months).

Kami women, staying at home, would seem to be in a better position to nurse at leisure, but they also find it easier to provide supplementary foods at home, and wean their children earlier than Tamang women do. However, Kami women also nurse their children for comfort (as opposed to hunger) more often than Tamang women, who, because of work constraints, nursed their children primarily when it seemed to serve a nutritional purpose, or to put the children to sleep so they would not disturb their work patterns (Panter-Brick, 1991; Catherine Panter-Brick, personal communication, 1994).

This type of quantified study of breastfeeding behavior is very time-consuming and difficult to interpret in terms of its nutritional and fertility-related implications. One problem is that it is often impossible to distinguish among (1) a child nursing vigorously and receiving substantial quantities of breast milk, (2) a child nursing for comfort, or pleasure, or while asleep, who is not extracting significant quantities of milk, and (3) a child who is suckling from a woman who is not, in fact, lactating.

The nutritional consequences for the child, and the fertility consequences for the mother, of different combinations of frequency, duration, and intensity of breastfeeding sessions may be impossible to determine. However, Panter-Brick's careful work clearly shows that "breastfeeding" is not *one* behavior, even in one population (1991), and does not serve only one (nutritional) purpose. Her work also reminds us not to make assumptions about the relationship between the type and quantity of women's work and the frequency or duration of breastfeeding episodes, or the consequences for weaning age, or about socioeconomic status and feeding patterns (Panter-Brick, 1992).

### THE WIDER CULTURAL CONTEXT OF BREASTFEEDING: THE UNITED STATES

Like Mali, Sierra Leone, and Nepal, breastfeeding in the United States is embedded in a wider cultural context, one that is very different, but no less powerful in shaping breastfeeding behaviors. In the United States, the wider cultural context of breastfeeding is shaped by four fundamental assumptions that underlie beliefs about breasts: (1) the primary purpose of women's breasts is for sex (i.e., for adult men), not for feeding children, (2) breastfeeding serves only a nutritional function, (3) breastfeeding should be limited to very young infants, and (4) breastfeeding, like sex, is appropriate only when done in private.

#### Assumption 1: Breasts are Primarily for Sex

In the United States, many people, including many women, define women's breasts primarily as sex objects, as a focus of eroticism. Western culture is obsessed with the sexual nature of women's breasts and their role in attracting and keeping male attention, as well as their role in providing sexual pleasure for men and women (see Jelliffe and Jelliffe, 1979; Latham, 1975; and Van Esterik, 1989 for other discussions of these and closely related topics). This is reflected in many different arenas of American culture, both by the "normal" circumstances under which breasts are exposed in the United States, by the phenomenon of breast augmentation surgery (female mammary mutilation), by the association of breasts with sexual pleasure, and by the reactions of people when they do see women using their breasts to feed their children.

*"Normal" Circumstances of Breast Exposure in the United States.* Under "normal" circumstances in the United States, women's breasts are cov-

ered up by clothing. Among "respectable" women, partial exposure of the tops and sides of the breasts is acceptable in public only in the evening, and only in explicit, sexually alluring circumstances. For example, a woman may wear a low-cut evening gown to a fancy party, with substantial cleavage exposed, and be admired by onlookers, especially if her breasts are large. The same dress worn to church, or to teach elementary school, would be considered inappropriate. Similarly, a scanty bikini top may be all right for the beach, but not for the office. Even the most daring evening or beach wear must, however, completely cover the nipple and areola of the breasts.

In the context of pornography, women do expose their breasts, including the nipple and areola. The massive pornography industry in the United States includes magazines, books, videotapes, films, topless dancers, sex-shows, lingerie-night at the Hilton lounge, and so on. In all of these venues, much of the allure is focused on women's breasts, particularly, once again, on large breasts. Large breasts are portrayed in the media as sexy, beautiful, and essential for attracting the attention of men.

If you do not have large breasts, you are urged to acquire them through exercises, padded bras, inflatable bikini tops, or breast augmentation surgery. Teen magazines advise their young readers how to achieve the appearance of large breasts through various avenues, assuming that the girls already understand the value and desirability of large breasts (*Teen Magazine*, 1993).

In advertising, scantily clad women, almost always with large breasts, are used to sell everything from lingerie to cigarettes to beer. In 1992, the news program "20/20" aired a segment involving interviews with high-fashion models who claimed that they could not get as much work, and were not hired for the better-paying lingerie and swimsuit modeling jobs, unless they had large breasts. This is particularly difficult for most models to achieve because they are also required to have almost no body fat. Thin bodies can be achieved through dieting, but that also reduces the size of a woman's breasts. Thus, models often resort to breast augmentation surgery with silicone or saline implants to be successful at their careers. The image of the ultrathin woman with large breasts has come to stand for beauty, sexiness, and success as a woman. In at least one instance, an article in *Time Magazine* even referred to women's breasts as "human genitalia" (Quinn, 1992).

*Breast Augmentation Surgery (Female Mammary Mutilation).* The use of surgery to make one's breasts larger, and therefore to make one more attractive, is not limited to high-fashion models. Students in my anthropology classes at Texas A&M report that it is customary for upper-class parents in the Dallas-Fort Worth area to give their daughters breast

implant surgery as high school graduation gifts. It is explicitly recognized by both parents and daughters that the young women will get more dates and be more popular in college if they have larger breasts. As one student put it: "Among the wealthier families, the boys get hot cars for graduation, and the girls get big breasts."

In 1992, it was estimated that between 1.6 and 2.0 million U.S. women already had breast implants, and the demand keeps growing, at the rate of 150,000 each year. Eighty percent of these breast implant operations are purely for enhancing the size of perfectly normal breasts. The other 20% are for reconstructive surgery following removal of a breast due to cancer, and are typically *not* classified as "cosmetic," even though the implant does not contribute in any way to the woman's physical health. In the early 1990s, the safety of silicone breast implants, manufactured by Dow-Corning Corporation and other breast implant manufacturers, was questioned, following media reports of complications including scar formation, hardening of the implant, migration of the implant, silicone leakage, and autoimmune disease. The focus in the media was on whether the breast implant manufacturers conducted thorough safety trials, and why they ignored the results of their own preliminary studies showing that the implants were prone to failure (Byrne, 1992; Chisholm, 1992).

The original disclosure of these findings resulted in a 90-day moratorium on implant surgery, and discussion then focused on whether implants should be banned altogether, and whether women who were not having problems with their implants should have them removed. Throughout these discussions, very little was said about *why* so many women felt the need to surgically alter their bodies to meet an unrealistic cultural ideal. For example, *Mirabella* magazine published an extensive article in August 1991, complete with photographs, on the dangers of implant surgery, without ever raising the underlying issue of *why* women might want this surgery (Drawbridge, 1991).<sup>3</sup> A notable exception was an article in *McCall's* magazine titled "Why Women Want Man-Made Breasts" (Mithers, 1992), which briefly discussed the cultural pressure on women in the United States to have large breasts.

The American Society of Plastic and Reconstructive Surgeons (the group of surgeons, almost exclusively male, who make money from breast augmentation surgery) told the Food and Drug Administration that "There is a substantial and enlarging body of medical information and opinion to the effect that these deformities (small breasts) are really a disease" (Ehrenreich, 1992). Women with perfectly normal, functioning breasts were told that they had micromastia (literally "small breasts" in Latin), a disease for which the only cure was breast augmentation surgery (Ehrenreich, 1992). In another statement, the Society claimed

that "If left uncorrected these deformities [small breasts] can cause a total lack of well-being" (Cited in Mithers, 1992).

In the United States, both in the public eye, and in the eyes of the medical establishment, not only are breasts most commonly viewed as sexual organs, but small breasts are viewed as a disease, and providing all women with large breasts is considered a public health issue. Adding their voices to the breast implant controversy were a number of women who demanded that their "right to choose to have implants" be restored. Some women cited "mental health" issues in defense of their right to have surgery to make their breasts larger, claiming that their body image and self-esteem would be permanently damaged if they were not able to have large breasts.

How can we understand this Western cultural perspective of women's breasts as sex objects, a perspective that has led to more than two million women voluntarily mutilating their bodies in pursuit of a male-defined sexually attractive ideal? A comparison to an analogous complex of beliefs and behavior in a very different cultural context may help us think about these issues from a broader perspective.

*Are Mammary Glands Intrinsically Erotic in Humans?* First, despite what the typical Western male thinks, including U.S. anthropologist Owen Lovejoy (1981) and British physician Peter Anderson (1983)—see further discussion below—there is no evidence that the human female breast is *intrinsically* erotic. Men and women in Western, industrialized countries are taught by their culture to think of breasts this way, from a very early age, but it is only a cultural belief of limited distribution, shared by relatively few cultures around the globe.

A perfect analogy to the way Western culture eroticizes breasts is the now-defunct practice of foot-binding in China, which persisted from some time prior to A.D. 960 until well into the twentieth century (Anagnost, 1989; Levy, 1992). Young girls in upper-class families in China had their feet bound so that, as adults, they would have tiny, severely deformed feet. The binding process, usually performed by their mothers, took place when the girls were between 6 and 8 years of age. Tight bandages bound the four lateral toes underneath the foot. "While subject to sores and putrescence which caused them further suffering, their feet were forced into a succession of progressively smaller shoes until they achieved the desired three inches in length, a process that took about two years" (Anagnost, 1989:331).

Tiny feet were usually a sign of high status, a symbol of wealth, as they marked a family who could afford to forego the agricultural labor of its women. They were also viewed as "an effective way of ensuring the virtue of women by circumscribing their movement . . . a sign of femi-



nine virtue and respectability. . . . The smallness of one's feet therefore became an acutely conscious measure of feminine presentability, and this is important to remember when trying to understand how foot binding could have been *a form of oppression that women enacted against themselves*" (Anagnost, 1989:330, emphasis added). Among the lower classes, women were "merely hobbled" (Anagnost, 1989:331), and were still expected to work in the fields.

Tiny feet, known as "Golden Lotus," were also highly valued, even worshipped by men, as the ultimate in erotic stimulants (Levy, 1992). The practice of foot-binding took a perfectly healthy, functional organ, the foot, and mutilated it through the cruelest torture into something useful only for male sexual pleasure. Women without bound feet were ridiculed and shamed for their big feet (Gordon and Hinton, 1984). Women with bound feet could not walk properly and could not stand for long hours on their feet; some were in constant pain for much of their lives. Men also claimed that it was easy to keep a woman with bound feet "in line" as all a husband had to do during an argument with his wife was stomp on her foot, and she would submit to his wishes (Gordon and Hinton, 1984).

Most Americans view Chinese foot-binding as the barbaric practice of backward people. Yet breast augmentation surgery, or female mammary mutilation, as it is more properly called, is *essentially the same thing* (Table 7.1). A perfectly healthy, functional organ, the breast, is mutilated through surgery into something useful only for male sexual pleasure. Rarely is the lactational function of the breast preserved, or even considered, in breast augmentation surgery. Women with small breasts are

Table 7.1. Comparison of Breast Augmentation Surgery (Female Mammary Mutilation) and Chinese Foot-Binding

Feature	China	United States
Body part	Feet	Breasts
Normal biological function	Locomotion	Lactation
Culturally defined function	Sexual stimulant	Sexual stimulant
Cultural modification	Foot-binding	Breast augmentation surgery
Effects on normal function	Often completely impaired	Often completely impaired
Primary promoters	Usually women, for their daughters	Usually women, for themselves
Effects on health	Scarring, infections, pain	Scarring, infections, pain, perhaps autoimmune disease

made to feel inadequate, unattractive, even abnormal. The largeness of one's breasts therefore becomes "an acutely conscious measure of feminine presentability." A body part that is not intrinsically sexually stimulating to the male of the species is culturally defined as being so, but only in certain (deformed/abnormally large and pert) configurations. Women go to great lengths to achieve this ideal, even to the point of permanent mutilation and long-term damage to their health.<sup>4</sup>

The Western preoccupation with breasts as sexual organs spills over into anthropological theory as well, where it is reflected in many (usually male) anthropologists' recreations of early hominid behavioral evolution. The prime example is the model proposed by Owen Lovejoy, based in part on elaborate speculation by zoologist Desmond Morris in his popular book *The Naked Ape* (Morris, 1967). Lovejoy (1981) suggests that prominent breasts among female Australopithecines helped attract males in the first place, and then helped cement the pair-bond relationship necessary for further physical and cultural evolution toward modern humanity (Lovejoy, 1981). This model is still often presented in introductory anthropology textbooks (for example, Nelson and Jurmain, 1991:264). The aspect of the model dealing with the "erotic value of prominent breasts in early hominid females" is seldom questioned.

How valid is this perspective? The mammary glands play no role in sexual behavior in any species other than humans. Among humans, the cross-cultural evidence does not support the notion that male attraction to female breasts is a widespread, universal phenomenon across all populations of the human species. People in most cultures do not regard female breasts as sexually stimulating, manipulation of the breasts is *not* a common aspect of sexual behavior in most cultures, and women in most human populations do not have particularly prominent breasts. Why, then, do anthropologists such as Lovejoy construct elaborate scenarios of hominid evolution to explain the Western *cultural* phenomenon of defining breasts as erotic?

In 1983, British physician Peter Anderson wrote an article titled "The Reproductive Role of the Human Breast," published in *Current Anthropology*. Early in the introduction he cites Lovejoy's 1981 article. Later, in a section titled "The Erotic Role of the Human Breast," he cites Ford and Beach (1952)<sup>5</sup> as his reference for the claim that "*In many cultures the size and shape of the woman's breasts are important criteria of sexual attractiveness*" (Anderson, 1983:26, emphasis added). Anderson's article is often cited when people want to claim that attraction to human female breasts is a biological propensity of human males. What did Ford and Beach actually say on this subject?

In their cross-cultural survey of patterns of sexual behavior in 190 cultures around the globe, Ford and Beach had this to report about the



role of female breasts in sexual attraction: "In a few cultures the size and shape of the woman's breasts are important criteria of sexual attractiveness" (Ford and Beach, 1951:87, emphasis added). In their Table 5 (p. 88), they cite 13 cultures, out of the 190 surveyed, where men viewed women's breasts as sexually attractive. In nine of these cultures men preferred large breasts, in two cultures men preferred long, pendulous breasts, and in another two cultures men preferred "upright, hemispherical breasts." Clearly, "a few cultures" was transmuted to "many cultures" by Anderson because the reality undermined the purpose of his argument, which was to explain male attraction to female breasts in a pan-human, evolutionary manner.

Similarly, the cross-cultural evidence does not support the notion that women's breasts play an important role in sexual behavior in humans. Once again, Anderson's article is often cited in this context, and Anderson cites Ford and Beach (1952) to back up his statement that "in most cultures stimulation of the woman's breasts is a common precursor to intercourse" (Anderson, 1983:26, emphasis added). Ford and Beach's cross-cultural survey actually said: "Manual or oral stimulation of the woman's breasts by the man frequently precedes or accompanies intercourse in the United States. . . . Stimulation of the woman's breasts by her partner is a common precursor or accompaniment of intercourse in some societies other than our own" (Ford and Beach, 1951:46, emphasis added). In a footnote, the authors again list 13 societies, out of 190, in which women's breasts are stimulated before or during sexual intercourse. Of these 13 societies, only three are also listed among the 13 where breasts are considered sexually attractive. Once again, Anderson has transmuted "some societies" to "most cultures," yet his miscitation is often cited and repeated.<sup>6</sup>

Finally, the anatomical reality is that most women do not have particularly "prominent" breasts unless they are in certain biological categories (overweight, pubescent, pregnant, or lactating), or use cultural adjustments (push-up bras, inflatable bikini tops, or breast implants). In Mali, people referring to the age of a young woman will make reference to whether her breasts have "fallen" yet or not, recognizing that only young, nulliparous girls have prominent breasts. Someone whose breasts have "fallen" is merely an older woman, however, not someone to be reviled, and a woman's sexual attractiveness depends on her face and thighs, not on the size or shape of her breasts.

"Why do human females, alone among the primates, have 'prominent' breasts?" When the question is posed, we need to look first to whether, or to what extent, this is even true. Second, we should begin from the assumption that since breasts serve the biological function of child survival, then prominent breasts, to the extent that they exist in

humans, probably serve some adaptive role in child survival. Perhaps the breasts are a convenient and handy place to store excess fat when available, fat that can be easily and quickly mobilized into the breast milk during times of nutritional stress. Along the same lines, it is most probable that the nipples contain erectile tissue to facilitate the child's latching-on to nurse, and that the contrasting color and texture of breast versus areola function as visual and tactile "bull's eyes" to help the child find the nipple, not as "epigamic features" to attract male attention, as some have claimed (Montagna and MacPherson, 1974, for example).

Are mammary glands *intrinsically* erotic in humans? The ethnographic evidence clearly says "no." As Anderson himself points out, "We seem to be the only mammal in which the mammary gland has this erotic function" (1983:26). Even among humans, according to Ford and Beach's survey (1951), only 13 out of 190 cultures report that men view women's breasts as being related to sexual attractiveness, and only 13 out of 190 cultures report male manipulation of female breasts as a precursor or accompaniment of sexual intercourse. Given that the ethnographic evidence suggests that in only a small percentage of human societies is the mammary gland viewed as erotic or sexual, we are led to the conclusion that such behavior has a purely cultural basis, with a limited distribution. Obviously, humans can *learn* to view breasts as sexually attractive. We can learn to prefer long, pendulous breasts, or upright, hemispherical breasts. We can learn to prefer large breasts. All of these views can be culturally imposed, just as some Chinese men learned to view tiny, deformed feet as sexually attractive. Once we understand that these behaviors have a *cultural* basis, we can stop searching for creative, evolutionary, adaptive, explanations of why they exist.

Because these views are culturally imposed, we can stop searching for adult male-based explanations of why it would be adaptive for women to have prominent breasts, to have erectile tissue in their nipples, and for the areola to be a different color and texture than the rest of the breast. Because these views are culturally imposed, we can choose not to accept the idea that large breasts are desirable, and worth the high cost to women's and children's health. Because these views are culturally imposed, we can consciously choose the alternative route of using cultural beliefs to reinforce, rather than deny, the biological function of women's breasts as body parts designed for nurturing children.

*Is Breastfeeding Sexually Stimulating?* In almost every discussion of breastfeeding published in a Western context, the issue is raised of whether the activity of breastfeeding itself is sexually pleasurable or stimulating to the mother. Given our cultural context of viewing breasts as erotic, this is not surprising. What is surprising is that so few people,

scientists and medical professionals included, have recognized the culture-bound nature of the question.

For example, Hytten claims: "Many women enjoy breast-feeding. They derive considerable sensual, even erotic pleasure from the suckling and a sense of pride and satisfaction when the baby is obviously thriving. Such a picture is held up by enthusiasts for breastfeeding as the norm, yet for the majority of women breast-feeding offers no such pleasures" (Hytten, 1991:131). Hytten then goes on to claim that many women experience discomfort and pain while breastfeeding, and that breastfeeding also exhausts them, leaving one with the overall impression that breastfeeding is *not* pleasurable for the mother.

In addition, some opponents of "prolonged" breastfeeding have argued that the mother is continuing to breastfeed an older child to satisfy her own sexual needs, because she finds breastfeeding sexually satisfying (see Chapter 2, this volume, for a fuller discussion of this perspective).

We can approach this question by breaking it into several component parts. First, are the breasts particularly sensitive? Second, is it the case that breastfeeding is always, or even usually, pleasurable for the mother? Third, are all physically pleasurable feelings necessarily *sexual* feelings?

*Are the Breasts Particularly Sensitive?* It is often assumed that breasts are particularly sensitive and are richly endowed with sensory nerves, but this does not seem to be the case. Montagna and MacPherson conducted anatomical and histological analyses of human breast tissues, and found no evidence that the breasts are particularly sensitive. They write:

There is a widespread notion that breasts, nipples, and areolae in particular, are erogenous areas, highly sensitive to tactile stimulation. Thus they are assumed to be rich in cutaneous sensory nerves. Physiologic data, however, contradict this assumption. Morphologic preparations show only a few recognizable nerve end organs at the tip of the nipple around the galactophores of the glands of Montgomery. In most of the other areas of the breast except around the vellus hairs there are relatively few superficial nerves of any kind. (1974:10)

These authors also cite other research showing that the nipples, areolae, and peripheral breast areas are relatively insensitive to warmth, cold, pain, and pressure (Montagna and MacPherson, 1974:15). According to Montagna and MacPherson, the tips of the nipples themselves are the most sensitive part of the breast. During breastfeeding, the nipples are being compressed between the base of the infant's tongue and his/her palate.

That human females can *learn* to associate oral and manual manipulation of their breasts during foreplay with sexual arousal and pleasure is well-known. They can also learn to associate many other activities with sexual arousal and pleasure ("dirty" language, earlobe nibbling, pornographic films, sexual fantasies, or bondage, for example). This does not automatically mean that the breasts are particularly sensitive, or that the sensations a mother experiences from breastfeeding her child should be interpreted as *sexual* pleasure.

*Is Breastfeeding Always, or Even Usually, Pleasurable for the Mother?* Certainly breastfeeding can be pleasurable for women. The intense, intimate bond that exists between a mother and her nursing child can be a source of great pleasure to the mother. To be cuddled up with one's child, knowing that your body is capable of sustaining life and health in this new person you have created, can be an immense source of pride and satisfaction for the mother, as Hytten noted above. Many women enjoy breastfeeding their children, and well they should. It is the one thing, other than giving birth itself, which women can do that men cannot. It can be a great boost to self-esteem, and many women report feeling linked to all other women, especially to their own mothers and grandmothers, as they sit and nurse their children. An acquaintance of the author expresses it this way: "I enjoy breastfeeding my two-year-old because I love what it does for him. It relaxes him, it calms him down, it makes him happy. He knows without any doubt that his mommy loves him" (Anonymous, personal communication).

The explanation of these feelings of empowerment and well-being is partly cultural and partly physiological. During breastfeeding sessions, two hormones are released by the mother's pituitary gland. Oxytocin is released in response to the physical stimulation of the child's suckling of the breast. In many women, just the sight, sound, or even thought of their child can trigger oxytocin release and milk let-down. Oxytocin has been described as "the hormone of love," by Niles Newton, who devoted her life to the study of the role of oxytocin in breastfeeding and maternal behavior (Newton and Newton, 1948; Romano, 1990). Oxytocin stimulates a mother's let-down or milk-ejection reflex. It also stimulates contraction of the uterus, which is essential to expulsion of the placenta and prevention of hemorrhaging immediately postpartum. In addition, oxytocin triggers nurturing behavior and affectionate feelings toward others. Both men and women release oxytocin in conjunction with eating, and with orgasm (Newton, 1978).

It is clear from animal and human studies that high circulating levels of oxytocin contribute to general feelings of well-being in breastfeeding mothers (Insel and Shapiro, 1992; McCarthy, Kow and Pfaff, 1992). What

is not clear is that either the surge of oxytocin itself, or its immediate consequences, is recognized as physically pleasurable by the mother. The milk let-down reflex, when the milk-producing cells high on her chest release milk into the milk ducts of her breasts, is usually described by women as a "warm, tingling sensation." For some women, it can be painful or unpleasant. The effect of oxytocin on the uterus is most clearly felt immediately postpartum. These strong uterine contractions can be as painful as intense labor. In any case, the immediate or longer-term effects of oxytocin released by breastfeeding cannot automatically be interpreted as feelings of *sexual* pleasure in the breastfeeding woman.

A second hormone, prolactin, is released by the mother's pituitary in response to the removal of milk from the breast by the child. Prolactin acts as the mediator between the child's demand for milk and the mother's supply. The more milk the child removes, the more prolactin is released, and the more milk the mother produces. Breast milk production is a demand-driven system. In addition, prolactin acts—either directly or through some intermediary—to suppress ovulation in the woman (see Chapter 11, this volume). Like oxytocin, prolactin acts to relax the mother and induce feelings of well-being and calm. Thus, there are both psychological and physiological factors that contribute to breastfeeding being pleasurable for women, but these are all vague, overall feelings of well-being, not specifically physical pleasure from the act itself.

Sometimes the physical sensation of the child nursing is pleasurable because it evokes all these "warm fuzzies." Sometimes it is pleasurable in the same way as many different forms of physical contact are pleasurable: like taking off your shoes, like a hug from a friend, like someone holding your hand, like scratching an itch. All of these descriptions have been offered by breastfeeding women as they try to describe "what it feels like."

Some authors have argued that breastfeeding *must* be pleasurable for the mother, or the species would not have survived. For example, Rioridan and Rapp (1980:109) claim: "The objective of this article is to explore the hypothesis that one of these [feminine reproductive functions], breastfeeding/lactation, is a sexually pleasurable process for the mother in addition to providing nourishment for her infant. Included in this hypothesis is the assumption that the very survival of *Homo sapiens* has been dependent on these sensual reinforcements of breastfeeding. If it were not so, man would have joined the dinosaurs in extinction long ago." (1980:109). La Leche League International's statement on "Breastfeeding and Female Sexuality" includes a similar statement: "The human race would not have survived if breastfeeding was not enjoyable for mothers" (La Leche League International, 1992). In a similar vein, Newton and Newton write: "The survival of the human race, long before the

concept of "duty" evolved, depended upon the satisfactions gained from the two voluntary acts of reproduction—coitus and breastfeeding. These had to be sufficiently pleasurable to ensure their frequent occurrence" (1967:1180).

All of these statements reveal a fundamental misunderstanding of the mechanisms of evolution by natural selection. Natural selection operates on populations to increase the frequency of alleles (variant forms of genes) that increase reproductive success. To the extent that breastfeeding behavior in humans has a genetic basis, natural selection will act to increase the frequency of any alleles that contribute to breastfeeding success. Throughout the prehistory and history of the species, and continuing today, women who breastfed their children had greater relative reproductive success than women who did not. That is, breastfeeding provided a health advantage to the child, and a reproductive advantage to the breastfeeding mother, so that she ended up with more children surviving to adulthood—the measure of reproductive success—than women who did not breastfeed. Whether breastfeeding was pleasurable to the mother or not is a moot point. As long as breastfeeding conferred a reproductive advantage, the behavior would have been selected for, whether or not it was pleasurable to the woman.<sup>7</sup> One cannot argue from an evolutionary perspective that breastfeeding must have been "sensual" or conveyed "sexual pleasure" to the breastfeeding mother in order for the species to survive.

At the same time, many women report that they are afraid to attempt breastfeeding, because they have heard that it is painful. Others say that they fully intended to breastfeed, but gave it up in defeat after a few days, because their nipples hurt. It is the case that the physical sensation of the child nursing can be painful due to sore nipples. Every lay publication on breastfeeding has a section on how to prevent and treat sore nipples. Sore nipples are usually the result of improper positioning of the infant on the breast, which can be easily corrected if the mother is referred to someone capable of diagnosing and correcting the problem. Sore nipples can also be caused by "nipple confusion" in infants who have been given pacifiers and bottles. When a child accustomed to a pacifier or bottle nipple is put to the breast, he may suck only on the end of the nipple, rather than taking the entire nipple and much of the areola into his mouth. This can result in sore nipples in the mother and poor growth in the child, who is not able to remove breast milk from the breast efficiently. Nipple confusion of this kind is easily avoided by not using pacifiers or bottles.

In addition, sometimes nipples get sore simply because the child is nursing very often or has been nursing in a particular way (turning his head to look at something without releasing the nipple, for example). Sometimes sore nipples are a symptom of a fungal infection known as



thrush (*Candida*). Sore nipples may be the result of anxiety on the mother's part, which interferes with the milk let-down reflex, requiring the infant to suck harder and harder to extract milk. Contrary to popular belief, the child's teeth are *not* usually a source of pain for the mother. The child's lower teeth are covered by his or her tongue during active suckling, and the upper teeth are placed high on the areola. If the child does bite the mother, as children sometimes do, it hurts, whether or not the child has teeth—a young infant can clamp down with toothless gums and cause just as much pain as an older child who bites. Thus, breastfeeding a child can be painful for the mother, but these sources of pain are easily correctable if the mother gets appropriate advice from a knowledgeable and supportive source.

Sometimes the physical sensation of the child nursing is annoying. The mother is tired, she needs to be doing something else, the baby has been nursing all day because of a growth spurt, or a new tooth, or an illness, and she just wishes she could be somewhere else, doing something else; or she is awakened during the night by the child waking up, once again, and latching on.

Sometimes the physical sensation of the child nursing is simply neutral. It does not feel like much of anything, one way or the other. Especially after a mother has nursed several children, and is well into her second or third year of nursing a child, the physical sensations may be negligible, as the nipple becomes desensitized due to prolonged contact. This is probably the most common experience of most women for most of their breastfeeding careers. "You can tell the baby is nursing, but that's it," as one woman told me. Some authors, committed to the idea that breastfeeding is sexually pleasurable to women, have even explained away the reports of many women that breastfeeding is *not* sexually pleasurable by suggesting that these mothers are in denial, or feel too guilty or embarrassed to admit to having sexual feelings while breastfeeding (Riordan and Rapp, 1980). A simpler explanation is that these women are telling the truth.

Thus, it appears that the physical sensations evoked by a child breastfeeding range from physically pleasurable to painful, annoying, or neutral. For most women, most of the time, the physical act of breastfeeding is either pleasurable or neutral.

We can go on to ask, if a mother *does* experience physically pleasurable sensations during breastfeeding, are these feelings necessarily *sexual* feelings?

*Are All Physically Pleasurable Feelings Necessarily Sexual Feelings?* Is there anything *intrinsically* erotic or sexually stimulating about pleasurable feelings arising from manual and oral stimulation of the nipples and

areola, or do people in some cultures *learn* to respond in a sexual way to such behavior? To put it another way, if your only experience of breast stimulation has been in a sexual context, then when you experience those feelings during breastfeeding, will you tend to interpret those feelings as *sexually* pleasurable?

An analogy may help us think about this issue in an objective manner. Is there anything *intrinsically* erotic or sexually stimulating about a back rub? Among some couples, back rubs can be a prelude to sexual intercourse, and the feelings evoked by a back rub under such circumstances—the privacy of a bedroom, a desirable partner, strong emotional involvement, perhaps even candle light, scented oils, a little wine, a little Louis Armstrong—can certainly be interpreted as erotic and sexually stimulating. Conversely, *the very same physical motions, the very same physical feelings*, equally as physically pleasurable, administered by a trainer in a gym after a workout, or by a physical therapist subsequent to an injury, normally do not evoke erotic feelings, nor are they usually interpreted as sexually stimulating. To claim that breastfeeding a child, or getting a back rub from a professional masseuse/masseur, is *intrinsically* erotic is to confuse content with context. Similarly, if a woman construes the physical sensations of a child breastfeeding as sexually stimulating, it is most likely because she has internalized her culture's beliefs that breasts are primarily for sexual pleasure, and because all of her prior experience with "mouth-to-nipple" contact was in a sexual context.

Riordan and Rapp state that in "many paintings of nursing dyads that abound in collections of great art, we may note a mood of introspection and a faint, bemused expression of pleasure on the mother's face" (1980:109). They argue that these expressions represent *sexual* pleasure, but they provide absolutely no justification for their interpretation. It does a great disservice to women everywhere to interpret the feelings of pleasure they enjoy from nursing and nurturing their children at the breast as sexual feelings.

The physical sensations of an infant or child nursing at the breast can be pleasant, of course. They can also be painful, or annoying, or totally neutral, depending on the context, the mother's mood, and the child's position at the breast (see above). By the same token, the sensations of a back rub can be physically pleasant, or painful, or annoying, or neutral, depending on the context, one's mood and the skill of the masseuse. The breasts are not particularly sensitive body parts; and while breastfeeding can be physically pleasant, it isn't always. When it is pleasurable, these feelings should not automatically be interpreted as *sexual* feelings.

As has been shown above, the overwhelming notion that female



breasts are sexual organs is reflected in pornography, advertising, evening wear, the demand for breast implants, and anthropological theories of early hominid evolution.

It is also reflected clearly in common public attitudes toward women who choose to go against the cultural norm, who choose to follow instead the biological norm, and use their breasts for feeding their children. At the same time that breasts, especially large breasts, are worshipped as evidence of female sexual attractiveness, the role of breasts in nourishing and nurturing children is often misunderstood.

*Reactions of People to Women Breastfeeding Their Children.* In the Western cultural context, many people are not comfortable seeing a woman breastfeeding. They are embarrassed; they do not know where to look, or what to say or do. Many public accommodations have rules against breastfeeding, and women are asked to leave or to cease breastfeeding. In restaurants, women have been told that they are "offending" their fellow diners by breastfeeding their children, and must cease or leave the restaurant. In her nationally syndicated advice column, Ann Landers tells mothers to nurse their children only in private, and to use the rest rooms if they must nurse their children while out in public. Another alternative she offers is for mothers to pump their milk at home and give it to their children in bottles, so as not to offend anyone.

All researchers who study breastfeeding in the United States can cite numerous instances of women being arrested, fired from their jobs, or harassed, simply because they were breastfeeding outside their homes (Jelliffe and Jelliffe, 1979:302). In the late 1980s, news personality Debra Norville was dismissed from her job as co-host of the Today show, in part because she posed for *People Weekly* with "one of her breasts exposed" (she was breastfeeding her newborn). The situation had not improved much by the early 1990s, as the following examples reveal: A woman breastfeeding in a grocery store was told by a store employee, "Don't you know that's what bottles are for?" A ten-year-old boy observed a classmate's mother nursing her infant, and remarked, "that's disgusting." He then turned around and made a joke about *Playboy* centerfolds to the other boys in the class, who snickered. The mother of a toddler was asked by the director of her son's day-care center not to breastfeed him in the classroom, in front of the other children. The director said she was afraid the children "would get the wrong idea." A university English professor was reprimanded by her department head for breastfeeding her 1-month-old infant during a writing workshop she was conducting for graduate students.

Given the typical cultural context in the United States concerning the primary purpose of breasts, is it any wonder that using your breasts to

feed a child seems odd, strange, perhaps even bizarre? Is it any wonder that doctors are so quick to recommend artificial infant-feeding products, and are so reluctant to help women work through breastfeeding problems? Is it any wonder that so many women are reluctant to even consider breastfeeding? In addition to this cultural context, another assumption underlies much of the research and rhetoric surrounding the relative merits of breast milk and infant formula—the belief that breastfeeding serves only a nutritional purpose.

### **Assumptions 2 And 3: Breastfeeding Serves Only a Nutritional Function and Is Only for Young Infants**

Even for people who do get beyond the idea that breasts are only for sexual purposes, another assumption clouds their thinking about breastfeeding: the notion that the process of breastfeeding itself serves only one purpose, a nutritional purpose, the transfer of breast milk from mother to infant.<sup>8</sup> This assumption has far-reaching implications for the cultural context of breastfeeding in the United States.

If your culture teaches you that the only function of breastfeeding is nutritional, and if it also teaches you that artificial feeding products are nutritionally equivalent to breast milk, then there would be no particular reason to choose one method over the other. If breastfeeding serves only nutritional purposes, then children should not want to nurse unless they are hungry, and mothers should not feel obligated to allow children to suckle if they have recently been fed.

If you accept the nutritional superiority of breast milk over artificial infant-feeding products, but still believe that breastfeeding serves only a nutritional purpose, then there is not much point in breastfeeding beyond the age of 12 months, when most children can drink from a cup, and begin to eat solid foods, and you may conclude that the sooner the child is weaned from the breast, the better.

Where does this belief come from, that breastfeeding serves primarily (or exclusively) a nutritional function? A powerful force to be considered in any discussion of breastfeeding in the Western, industrialized world is the infant formula industry. Prior to the vociferous "Infant Formula Controversy" of the 1970s and 1980s, manufacturers of artificial feeding products promoted their wares as being "scientific formulated," and superior to breast milk. Women were encouraged to doubt their own abilities to feed their children, and "insufficient" or "weak" milk were common diagnoses in mothers having problems breastfeeding their infants. Since the controversy, infant formula manufacturers have bent

over backward to acknowledge the superiority of breast milk in print and television advertising, and on the labels of their products. The formula companies vie with one another to claim that their product most closely mimics mother's milk, and ask "If it doesn't come from you, shouldn't it come from Gerber?" Recent advertisements compare the various nutritional components of one particular infant formula with those found in human milk, to demonstrate that this formula is most like mother's milk.

The infant formula industry even produces informational pamphlets, aimed at pregnant women, that extol the virtues of breastfeeding, "until you switch to bottles." However, a close examination of the images of breastfeeding women in advertisements for artificial feeding products and articles about infant-feeding choices in "baby" or "new parent" magazines is highly revealing. In the infant formula promotion literature, breastfeeding is often described and portrayed as a "quasi-sexual" behavior, an intimate, private experience between mother and child. Beautiful perhaps, laudatory even, but still, like sex, an activity best done while wearing a modest white negligee and in the privacy of one's own bedroom, and, of course, only with a very young infant. And breastfeeding is portrayed as having exclusively nutritional purposes.

The images of women breastfeeding their children that are used in infant formula advertising almost invariably show Caucasian women. They are shown breastfeeding newborns or young infants (as opposed to older infants, toddlers, or older children), they are pictured wearing modest, frilly, usually white, nightgowns or negligees, and the setting is usually a rocking chair in a middle- or upper-class baby's room. The not-so-subtle message is that nursing a child is not something one does while dressed in street clothes, not something one does while working, not something one does outside of the bedroom, let alone out in public or at work, and definitely not something one does with a child old enough to walk and talk.

For many women, the perception is perpetuated that breastfeeding is restrictive, confining, and limits one's activities outside the home. Likewise, the message is clear: breastfeeding is only for young infants, and the natural course of events is to wean the infant off the breast and onto a bottle of infant formula.<sup>9</sup>

In a recent pamphlet published by Ross Labs (1989), there is only one photo of a woman nursing who is not dressed in a negligee, sitting in the bedroom. This woman is dressed in regular clothing, and is shown sitting in her kitchen nursing her infant. In the background, her husband is cooking dinner. This may be meant to promote the image of the liberated, sensitive man, who is willing to help out his wife. But to many women, the message it sends is that "if you want to breastfeed, you'll

need someone to help with your regular chores." Help with the housework, whether from a spouse or from relatives, friends or paid workers, certainly makes it easier on the mother to tend to the baby, including breastfeeding, but in the West, such help remains a luxury that many women will not have. For a man, it may imply that he will have to do more work around the house if his wife breastfeeds, which many men are not willing to do. Other pictures in this brochure show men interacting with their children primarily by giving the baby a bottle, rather than some other mode of interaction such as diaper changing, bathing, dressing, or playing. For men who want to be involved, the message is that if your wife breastfeeds, you will not be able to help feed the baby, you might have to change diapers instead.

Along similar lines, several studies have been published recently focusing on how to support the husband of the breastfeeding woman, who may feel "left out" of the relationship between mother and child, or even jealous of the child's access to his wife's breasts (Jordan, 1986; Jordan and Wall, 1990, 1993; Walker, 1991). In the guise of promoting breastfeeding, these studies offer recommendations on how to help men cope with their feelings of envy and jealousy. For example, one author notes, "The changes [of pregnancy and lactation] may be especially problematic if the breasts have been a source of great sexual pleasure for the man. . . . During lactation, the presence of milk may serve as a constant reminder to the father that the breasts "belong" to the infant" (Jordan, 1986:95). Jordan's solutions include weekly nights out for the couple without the infant, and trips out alone for the mother, leaving the father to give the infant breast milk in a bottle, so that the father "does not feel totally deprived of the closeness engendered by the feeding experience" (Jordan, 1986:96). None of the suggestions for helping the couple deal with the father's feelings addresses the simpler, more basic, and permanent solution of changing what we teach our sons about the purpose of female breasts.

The fundamental idea that the infant formula companies want doctors and their patients to believe is that breastfeeding serves only a nutritional function, and that their product so closely mimics breast milk as to be interchangeable, or even superior. The infant formula companies have a vested interest in promoting the "commodification" of breast milk. They also want to promote the idea that breastfeeding is restrictive and confining to women, and that women should be worried about the quantity or quality of their breast milk.

Nutritionists also promote the idea that breastfeeding serves only nutritional purposes. For example, in 1994, Samuel Fomon, a highly respected expert on child nutrition, made the following statements: "One of the goals of nutritional management of the infant is to promote

eating in moderation. Therefore, as soon as the mother feels confident about her ability to breast feed her infant, usually by 10 days after delivery, she should begin to encourage the infant to terminate the feeding at the earliest indication of the infant's willingness to do so" (Fomon, 1994:1). Such statements reflect a purely nutritional approach to breastfeeding, as well as a woeful lack of knowledge of the literature on breastfeeding and growth published during the last decade. The DARLING study of Dewey and colleagues (Dewey, Heinig, Nommsen, Pearson and Lonnerdal, 1992; Heinig, Nommsen, Pearson, Lonnerdal and Dewey, 1993) showed conclusively that it is *bottle-fed* infants who consume excess amounts of formula, and who have problems with obesity. Breastfed infants in the DARLING study were significantly leaner for the same length and head circumference than the bottle-fed infants, and consumed far fewer calories and fat. The work of Woolridge and colleagues (Drewett and Woolridge, 1979, 1981; Woolridge, 1992 and Chapter 8, this volume; Woolridge, Ingram and Baum, 1990) has shown that breastfed children are quite capable of controlling their own intake, without arbitrary rules imposed from outside. The literature on the physiological mechanisms of breast milk content and appetite control in human children (Woolridge, 1992) shows that breastfed children do not have to be "taught" to eat in moderation—they have built-in mechanisms to monitor and control the intake of nutrients, when allowed to nurse on demand. Likewise, Fomon's advice is not supported by the anthropological and animal science literature on feeding frequency and duration (Ben Shaul, 1962; Trevathan, 1987; Wood, Lai, Johnson, Campbell and Maslar, 1985), which suggests that frequent feedings are appropriate for the human species. Comparative primate data indicate that several short nursing bouts per hour, around the clock, constitute the "natural" rhythm for higher primate breastfeeding frequency (Stewart, 1988), and a number of human populations still breastfeed in this manner (Konner and Worthman, 1980; Wood et al., 1985). There is no evidence that terminating a breastfeeding session "as soon as possible" is advisable from either the perspective of the child, in terms of growth and health, or the mother, in terms of maintaining milk supply and lactational amenorrhea. Most significantly, Fomon ignores the nonnutritional functions of breastfeeding—physical, social, psychological, and emotional development of the child, immunological protection, and of course the birth-spacing mechanisms of child suckling.

A final example comes from the work of Louis Lefebvre (1985), who proposed that frequent parent-offspring food sharing among certain nonhuman primates functions to promote early weaning. This hypothesis assumes that the primary, if not the only, function of breastfeeding is nutritional. Early weaning would be adaptive from the mother's per-

spective, as she could then invest in a subsequent offspring. Lefebvre tested this hypothesis using data from 52 primate species, and concluded that the hypothesis could not be supported. He concluded that parent-offspring food sharing serves some other purpose in nonhuman primates. Significantly for my argument here, he did *not* conclude that breastfeeding might serve nonnutritional purposes.

#### **Assumption 4: Breastfeeding Should Be Done Only in Private**

The image of breastfeeding as a quasi-sexual behavior that should be kept private has profound implications for whether women who work outside their homes can successfully breastfeed their children.

Women's work outside the home is often viewed as a barrier to successful breastfeeding, and, in industrialized countries, solutions range from longer maternity leave to having employers provide breast pumps and private places to pump, or even on-site child-care facilities, where children can be nursed during breaks or at lunch. Underlying these approaches is the assumption that breastfeeding is essentially incompatible with simultaneous work activity. But breastfeeding is not *intrinsically* incompatible with work outside the home. Rather, it is often *culturally defined* as incompatible in the United States.

An honest answer to the question, "Is breastfeeding compatible with women's work outside the home?" is a resounding "It depends." It depends on whether the work can be interrupted. It depends on whether the work can be done while sitting in one place, and whether it requires both hands or arms free. It depends on whether the work is physically dangerous. It depends on beliefs about the dangers to children outside the home—these may be "real" or "supernatural" dangers to children taken outside the home before a certain age, ranging from fear of exposure to germs to fear of supernatural spirits.

Likewise, if breastfeeding is defined as a "private" activity, and work involves "public" or "professional" contexts, then breastfeeding *becomes* incompatible with women's work by cultural definition. In the United States, all activities connected with child rearing are devalued. In addition, professional workplace culture in the United States demands an almost complete separation of private and professional lives. Only in the last decade have on-site child-care and leave to take care of sick children been accepted as legitimate demands by workers.

Whether breastfeeding is compatible with women's work also depends on who controls her work—does the woman have to answer to someone else for the amount and quality of her work, or does she set her



own pace and goals? And it depends on the nature, the temperament, of a particular baby, who may or may not be amenable to adapting to his or her mother's needs and his or her culture's ideas about how children should be fed. It also depends on the nature, the temperament, of a particular mother, who may be able to accomplish her work while breastfeeding her child simultaneously, or who may be able to interrupt her work often to nurse her child without losing her momentum.

Breastfeeding is not "one thing" for all women or for all children. Medical personnel, and even some La Leche League leaders, may promote the idea that infants should be nursed on a schedule, and that 4- or 3- or 2-hour schedules are reasonable. Some children are happy to nurse for 20 minutes or so, only every 3 to 4 hours, which some women still find too often, or too daunting. Other children want to nurse vigorously for only a few minutes, but more often, maybe even every hour. And then there are children who like to nurse either continuously, or at least every 45 minutes to an hour, and nurse less vigorously, but for longer stretches. Some children have more need to suck than others, which probably reflects an underlying need for some or all of the nutritional, immunological, social, and emotional benefits of breastfeeding. Some children can be mollified with a rubber pacifier or their fingers or thumbs, while other children insist on "mom." Some mothers allow the child to meet all of his or her sucking needs at the breast, some teach and promote self-comforting behaviors, while still others punish the child for thumb-sucking or finger chewing. Some infants are content to lie around watching the world or playing with toys while awake, while others want to be held and have continuous interaction with another person. Many parents in the United States prefer a placid, nondemanding baby, while in other cultural contexts a baby with a quiet temperament stands a poorer chance of surviving than one who cries and demands attention more often (de Vries, 1987). Despite reams of advice on how to "achieve" the kind of child you prefer, or your culture says is best, most women find that they must adapt, in part, to the child they got.

In the United States, it is often assumed by medical personnel, employers, and women themselves, that women must give up breastfeeding when they return to work after a typical 6-week maternity leave. They are told their milk will "dry up" unless they pump their milk several times a day. Pumping milk at work is only possible for women with the available time to pump, a private place to pump, and a refrigerator to store their milk. Many women do not have these luxuries. Another, less advertised, solution, is for women to maintain their milk supply for months or even years after returning to work full-time by nursing their children as often as possible when they are together. This technique works well, particularly if the child is able to nurse on de-

mand throughout the night. This simple solution, of course, runs up against another deeply held, but scientifically unsupported, American cultural belief—that children should sleep by themselves, in a separate room, and that they should sleep through the night as soon as possible (see Chapter 10, this volume, for a discussion of one of the biological side-effects of this cultural pattern).

One solution to the problem of sustaining breastfeeding in conjunction with maternal employment outside the home is to allow the woman to have her child with her at work. As discussed above, this would not be feasible in all circumstances, but certainly would work in many contexts if child rearing were more highly valued by the culture, if breastfeeding were defined as a legitimate, important aspect of child rearing, and if breasts could be culturally redefined as body parts elegantly designed for feeding children, not as sex objects.

## THE CULTURE OF MISINFORMATION

Where do these cultural assumptions about breasts come from, and how are they perpetuated? In the United States, a "Culture of Misinformation" surrounds breastfeeding. Not only are breasts defined as primarily sexual objects, and breastfeeding defined as a private activity with nutritional value only, but *accurate* information about breastfeeding is very difficult to come by. When making infant feeding decisions, women and men bring to the process a wide array of misinformation gleaned from parents, in-laws, siblings, friends, neighbors, talk shows, magazines read in doctors' offices, newspaper advice columns, television specials, etc. Unfortunately, much of this misinformation is either factually incorrect, incomplete, or a matter of personal opinion presented as "scientific" doctrine (see Jelliffe and Jelliffe, 1986, for a more thorough discussion of the misinformation about, and bias against, breastfeeding evident in scholarly publications).

Medical personnel, the people we most trust to provide us with objective, accurate information, constitute one of the primary sources of incorrect information concerning breastfeeding. Part of the problem is that issues of breastfeeding in the United States are usually considered the expert domain of the pediatrician, despite the fact that medical students receive little or no training in nutrition generally, and most receive no training at all in the normal physiological process of breastfeeding, or in how to handle problems that patients may present (Freed, 1993; Stanfield, 1984). Even if pediatricians were to be specifically trained in breastfeeding, most infant feeding decisions are made during pregnancy,



before the pediatrician is involved, and are shaped by values learned in early childhood. Obstetricians and gynecologists may ask pregnant women whether they are "planning to breastfeed or bottle-feed" and duly note it on their chart, but most do not discuss the health risks to the child (and to the mother) of choosing infant formula. The impression is given that the two products (breast milk and infant formula) and the two processes (breastfeeding and bottle-feeding) are equivalent, and the woman is entirely free to make her own decision based on personal preferences.

Even doctors who extol the "advantages of breastfeeding" to their pregnant patients say that they do not discuss the "risks of using artificial infant feeding products" because they do not want to make women feel guilty if they choose not to breastfeed. But when doctors do this, they are forgetting the doctrine of "informed choice." At least in Texas, before your child gets an immunization, you must read several pages of tiny print outlining all the possible risks, and then sign permission. But before you decide to use infant formula, no one even mentions that there may be adverse consequences. How, then, can women and their partners make informed choices?<sup>10</sup>

Some doctors are merely unwilling to discuss the pros and cons of alternative infant feeding choices with patients, what we might call a "sin of omission." Others actually provide misinformation about breastfeeding, what we might call a "sin of commission." I can cite numerous examples drawn from among my own acquaintances over the course of several years (1991–1993) in a town of approximately 100,000 people: An obstetrician told a woman expecting twins that she could expect to spend a minimum of 10 hours a day nursing her children. When the twins were born in early 1994, she was told by her pediatrician that she could not breastfeed them in the hospital because, if she did, he would not know how much or what they were getting to eat (Anonymous, personal communication). Another doctor at a major teaching hospital told the mother of a premature infant that breast milk was the *cause* of her infant's necrotizing enterocolitis, and the baby needed to be entirely on formula (Anonymous, personal communication). In fact, it has been well documented through careful scientific research that breast milk *protects* newborns against necrotizing enterocolitis (Lucas and Cole, 1990). Another doctor told a breastfeeding woman that spices in her food were the cause of her infant's intestinal bleeding (Anonymous, personal communication), without mentioning that infant allergic reactions from dairy products in the mother's diet are the *primary* cause of blood in the stools in breastfed infants (Host, Husby and Osterballe, 1988; Jakobsson and Lindberg, 1978; Juto and Holm, 1992; Lifschitz,

Hawkins, Guerra and Byrd, 1988). She was advised to wean the infant onto a cows' milk-based infant formula. Naturally, the problem worsened, and the child was switched to soy-based formula, and finally to corn-based formula. One pediatrician told a nursing mother that there was no point in nursing after 3 months because the baby's immune system had taken over by that time (Anonymous, personal communication), despite evidence that passive immunity from mother to infant through the breast milk lasts for about 6 months, and active immunity for as long as 6 years (Doren Fredrickson, personal communication).

Finally, despite the attempts of the Baby-Friendly Hospital Initiative, many hospitals persist in practices that are well-known to interfere with the establishment of lactation, including separating mother and infant during the critical first hours following birth, giving bottles of plain or glucose water, and routinely using pacifiers in the nursery, often despite repeated attempts by mothers to have their infants with them to nurse. The American Formula Manufacturers Association and the American Hospital Association are currently lobbying the U.S. government to disallow the Baby-Friendly Hospital Initiative in the United States.

Less obvious than lobbyists' attempts to disallow the Baby-Friendly Hospital Initiative, and extremely difficult to document, is the role that infant formula company advertising dollars play in editorial decisions of the entire genre of popular magazines aimed at the expectant and new mother market. Accurate nutritional and medical information about breast milk and breastfeeding, compared to the use of artificial infant feeding products, is seldom provided in these magazines.<sup>11</sup>

Because of this "Culture of Misinformation" surrounding breastfeeding, many women approach the decision and/or the first attempt at breastfeeding with minds full of contradictory, incorrect, or incomplete information. Breastfeeding in the United States can truly be described as a "lost cultural art." It is a learned behavior, full of cultural meaning, yet most women in the United States grow up without the experience of learning about breastfeeding through observing relatives, friends, or neighbors breastfeed. This is due, in part, to the fact that their mothers used bottles, and in part to small family size and close spacing of children, which means that many women have no younger siblings, or if they do, they were not old enough to remember even if their younger siblings were breastfed. It is also due to our tendency to keep breastfeeding a private activity, to be so discrete that even when breastfeeding in public, no one can tell. Thus, breastfeeding is not readily observable. Yet, we expect women to be able to master this complex behavior without any education, support, or encouragement, or in the face of active discouragement—no wonder so many are not successful, or never even

try. Combine this with the near constant bombardment of messages equating breasts with adult sexuality, and the stage is set for misunderstanding about the role of breasts in human reproduction.

In the fall of 1993, one of the undergraduate students in my "Women and Culture" course was totally flabbergasted to discover that the biological function of women's breasts was for feeding children. With obvious shock and disgust evident in her voice she asked, "You mean women's breasts are like a cow's udder?" That a young woman could reach college without ever having even heard of women using their breasts to feed their children is a sad commentary on American culture.

## DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

In conclusion, many different cultural beliefs, on a variety of subjects only peripherally related to breastfeeding per se, affect women's choices and women's success in breastfeeding their children. In the United States, the promotion of breastfeeding based on education about the nutritional and immunological superiority of breast milk can only go so far toward increasing the number of children who breastfeed in this country. To make serious progress we will need to change the underlying cultural context of breastfeeding in the United States: the assumption that women's breasts are sexual objects valued only in the context of sexual pleasure, rather than for feeding children, the assumption that breastfeeding serves only a nutritional function, the assumption that breastfeeding is appropriate only for young infants, and the assumption that breastfeeding is appropriate only in private. Finally, we can do much to combat the "Culture of Misinformation," by providing, to all parties concerned, accurate, current information about the biological costs to women and children of choosing not to breastfeed.

### Cause for Optimism?

Unlike Kennell and Klaus (1983), I do believe that an understanding of the evolutionary background of the human species carries clear implications for cultural change in the United States. Nevertheless, I would be pessimistic about the potential for cultural change in the United States concerning attitudes toward breastfeeding were it not for the major changes I have witnessed in my own lifetime with respect to tobacco smoking. Like artificial infant feeding, the risks of tobacco smoking were

difficult to pin down epidemiologically, and were not accepted by the medical establishment for many years. Like artificial infant feeding, an extremely powerful financial lobby worked very hard to counter the medical and public acceptance of the growing scientific literature on the health risks of tobacco smoking (see Fredrickson, 1993 for the genesis of this idea that there are striking similarities between the two issues). Despite these difficulties, public attitudes toward tobacco smoking have changed radically in the past 20 years. The number of people who smoke has dropped sharply during this time; many restaurants, including McDonald's, department stores, hospitals, public buildings, and workplaces have voluntarily banned smoking. Smoking is no longer allowed on most airplanes. Because of studies documenting the detrimental effects of second-hand smoke on nonsmoking bystanders, especially children, President Clinton is currently considering legislation that would outlaw smoking in all public buildings, and the Food and Drug Administration is considering whether or not to classify nicotine as a drug.<sup>12</sup> Because I have lived through this radical shift in public opinion, beliefs, and behaviors concerning smoking, I can imagine the same thing happening with bottle-feeding.

In the early 1990s, one can find evidence that we have reason to be optimistic that public attitudes toward breastfeeding are changing in the direction of more direct support. Two well-publicized cases in 1994 involved breastfeeding mothers being ejected from public buildings and even threatened with arrest for breastfeeding in public. They made the national news because the mothers did not slink home, embarrassed. The first case involved a New York shopping mall, where a woman breastfeeding her 3-month-old son was asked to leave by a security guard because she was "exposing herself" (AP wire story, 1994). The next day, more than 40 women gathered at the mall and staged a "nurse-in" to protest against the mall's attitude toward public breastfeeding. Similarly, in Texas, a woman was asked by a security guard to leave Houston's Museum of Natural Science because she was nursing her 6-month-old infant. The next day, more than 150 women and children gathered across the street from the museum and staged a "nurse-in" to protest against the museum's application to nursing infants of their policy prohibiting "eating" in the exhibits. The museum's response was that nursing mothers should go to the restroom to nurse their children. The fact that more and more women are standing up for their right to breastfeed their children in public, and finding widespread support from other people, is a cause for optimism. In addition, thousands of instances of women nursing their children in public without being harassed go unreported, and, therefore, unnoticed.

There are other reasons for optimism as well. Laws in most states have vague indecent exposure statutes that often define any exposure of the nipple and areola in public as "indecent exposure." Although breastfeeding in public is not against the law in any state, hypothetically, the indecent exposure laws could be used to characterize breastfeeding as indecent exposure. Beginning as long ago as the 1980s, in a quiet effort to clarify the issues, a number of states and local jurisdictions have been amending their indecent exposure statutes to explicitly exclude breastfeeding. As of 1995, New York, Florida, North Carolina, Nevada, Texas, Michigan, and Virginia were among the few states to specifically protect women who breastfeed in public (Elizabeth Baldwin, personal communication, 1995). Technically, all women have a constitutional right to breastfeed, and there are no laws anywhere in the United States that prohibit breastfeeding or limit the length of time a mother can nurse her child. The New York state law passed in 1994 defines any attempt to prevent a woman from breastfeeding a child, in any location where the woman has a right to be, as a violation of her civil rights, and includes stiff penalties for violation of the law (Elizabeth Baldwin, personal communication, 1994). In New Jersey and Pennsylvania legislation is being written to protect women's rights to breastfeed their children in public.

More and more official bodies are recognizing that breastfeeding is not just a "lifestyle choice" for women, but a health choice for both mothers and children. In Florida, state law requires medical professionals to go beyond providing information and education about breastfeeding and to "actively encourage" mothers to breastfeed. In Dade County, Florida, local ordinances provide incentive programs that allow hospitals to advertise themselves as "Baby-Friendly" if they meet the guidelines of the "Baby-Friendly Hospital Initiative" at the 80% level of compliance. Hopefully this will encourage other hospitals to take responsibility for this issue, rather than waiting for it to be mandated.

In the past several years, over two dozen large corporations have provided pumping breaks, breast pumps, private pumping rooms, and breast milk storage facilities for mothers who are breastfeeding their children. The World Alliance for Breastfeeding Action's (WABA) theme for 1993 was the promotion of a "Mother-Friendly Workplace." In the mid-1990s, the trend is for more and more companies to support the working mother, a change that has come about because society is recognizing that breastfeeding is a positive health choice for both mothers and children. Once again, Florida is leading the way with legislation pending to designate the entire state as a supporter of WABA's "Mother-Friendly Workplace" initiative. Because of these shifts in public, corporate, and legislative attitudes and policies, I am optimistic for the future of the cultural context of breastfeeding in the United States.

In the not too distant future, I can imagine a day when a young couple enters a restaurant with an infant or young child, and notes the sign on the front door: "This is a Breastfeeding Friendly Establishment." I can imagine a day when all 50 states have legislation guaranteeing a mother's right to breastfeed her child in public. I can imagine a day when infant formula is available by doctors' prescription only. I can imagine a day when all cans of infant formula carry a series of rotating warning labels from the Surgeon General that clearly state: "Use of infant formula may be hazardous to your infant's health. Infant formula is known to be a contributing factor in many cases of infant illness and death, including cancer and Sudden Infant Death Syndrome. The use of infant formula is known to reduce children's IQ as much as lead poisoning does, and hinders the development of strong affective bonds between mother and child." I can imagine a day when parents would have to sign a release when they buy infant formula, relieving the formula company of responsibility for causing higher rates of infant morbidity and mortality.<sup>13</sup> I can imagine a day when heavy taxes are levied on the sale of every can of infant formula, both to discourage its use and to help offset the enormous medical costs incurred by those who use it. I can imagine a day when insurance companies charge higher life-long premiums for health care coverage of bottle-fed children. I can imagine a day when all pregnant women are fully informed of the costs of bottle-feeding, in terms of both their own health, and their children's health. I can imagine a day when doctors no longer worry about "making mothers feel guilty for choosing not to breastfeed," any more than they worry today about "making mothers feel guilty for choosing not to use an infant car seat." I can imagine a day when women who work outside the home can take their children to work with them; a day when every employer has on-site child care, and women can have their children with them as they work, or can go to a nearby location to breastfeed their children as often as they like. I can imagine a day when women in the United States can choose to take a year or more of maternity/nursing leave, with a guarantee that their job will be waiting for them when they return. On good days, I can even imagine that this maternity/nursing leave will be paid leave, as it is already in most European countries! I can imagine a day when children are so used to seeing women nursing their children in public, including at work, that they just assume that is the way things have always been. I can imagine a day when movies, television shows, and children's books portray mothers, including nonhuman animal mothers, nursing their children as a matter of course, instead of giving them bottles.<sup>14</sup> I can imagine a day when anthropology students will learn about "the great breast implant debacle of the late twentieth century" as yet another example, along with Chinese foot-binding and



female genital mutilation, of cultural beliefs gone astray to the detriment of women and children. I can imagine a day when children grow up appreciating women's breasts for the wondrous, amazing, life-sustaining organs that they are. I can imagine a day when all the world's children, including those in the United States, start out breastfeeding, and are allowed to breastfeed for as long as they need.

What can we do to make these imaginations become reality? Among the first steps might be the following:

We can speak out against the prevailing cultural view that breasts are "naturally" sex objects, and that "breast-mouth" contact is, by definition, sexually charged. It is inappropriate to take the very Western cultural idea that breasts are sexual organs and turn it into a "Law of Nature," applicable to all people, at all times. It is inappropriate to let the very Western cultural idea that breasts are for men overshadow their primary biological function for feeding children, just as it was inappropriate for people in Chinese society to let the cultural idea that deformed feet were sexually stimulating overshadow their primary biological function for walking. Women and children are harmed by Western beliefs about breasts, both directly and indirectly, both physically and emotionally.

I am not suggesting that it is wrong or immoral or perverted to experience sexual pleasure from manual or oral manipulation of the breasts as part of sexual behavior. I am insisting, however, that we recognize this as *learned behavior*, learned in a particular cultural context. I am not suggesting that men and women in any culture should give up this aspect of their sexuality; I am suggesting that they should recognize this role of the breasts as a very distant, secondary *lagniappe*. Can't we "have our cake and eat it, too?" one may ask. Perhaps, I would respond, but with caution. Perhaps, but only to the extent that using our breasts for these purposes does not lead to the excesses represented by female mammary mutilation, widespread dissatisfaction among women with the way their bodies look, men who judge a woman's value on the size of her breasts, and widespread misunderstanding of the primary function of women's breasts, which leads to breastfeeding being defined as sexual behavior. The costs of these cultural beliefs, in terms of women's physical health and self-esteem, and children's health, are, it seems to me, too high a price to pay.

Women deserve to have their bodies accepted as they are, and not feel compelled to submit to the knife in pursuit of the perfect body. The size of a woman's breasts is not related to her ability to produce breast milk. We can teach our daughters that whatever the size of their breasts, they will be able to sustain and nurture their children through their breast milk. If we can teach our children that breasts are for feeding children,

then the phenomenon of female mammary mutilation and the issue of breast implant safety will simply fade away, as the desire and demand for artificially inflated breasts disappears.

We can educate ourselves, and others, about all the different roles that breastfeeding plays in normal, healthy child development. Breastfeeding is more than just the transfer of nutrients from mother to child. Not only nutritionally, but immunologically, physically, cognitively, and emotionally, breast milk is vastly superior to artificial infant feeding products, and breastfeeding is much more than just a way to feed a child, much more than just a "lifestyle choice." Women need to know about the advantages of breast milk and breastfeeding; they need to know that breast milk protects children against a variety of illnesses and parasites as long as they are ingesting it, and that an early diet of breast milk sets the stage for life-long health advantages through a strengthened immune system. Women also need to know about the very real "risks" of bottle-feeding, including higher morbidity and mortality during childhood, higher rates of cancer and diabetes in adulthood, and poorer cognitive development. Women need to know that infant formula is not "almost as good" as breast milk. They need to have realistic expectations about how often and for how long human children need to nurse, so that they will nurse often enough to produce enough milk, of sufficiently high fat content, to satisfy their child's needs. They need to know that breast milk continues to be an important source of clean, cheap, and convenient nutrition for their children as long as they are producing milk, and that breast milk can be a critical source of nutrients for a sick child. They need to know that breastfeeding releases a flood of hormones that promotes maternal behavior and that will help them cope with the many demands of child rearing. Women need to know that breastfeeding quiets a noisy or fussy child, relaxes an anxious child, comforts a sick, injured, or frightened child, and conveys unequivocally that the child is safe and loved. They need to know that a child who has the "safe haven" of his or her mother's arms is a secure, independent child, one who has the self-confidence to reach out and explore the world. Finally, women need to know that meeting their children's needs through breastfeeding, as long as children express those needs, is both normal and appropriate.

Everyone, from doctors and lactation consultants down to the youngest school children, needs to know that breastfeeding is not only for newborn infants. All of the evidence from our closest living relatives in the animal kingdom, the nonhuman primates, suggests a natural weaning age between 2.5 and 7 years of age. Cross-cultural evidence from around the world suggests that 2 to 4 years of breastfeeding is typical of modern humans.<sup>15</sup> The question "Is that child *still* nursing?" needs to be



stricken from our conversations. Parents and health professionals need to recognize that the benefits of breastfeeding (nutritional, immunological, cognitive, emotional) continue as long as breastfeeding itself does, and that there never comes a point when you can replace breast milk with infant formula, cows' milk or any other food, or breastfeeding with a pacifier or teddy bear, without some costs to the child.

We can work to counter the artificial separation of private and public domains, the cultural perception that our private lives have no relevance for our professional lives, and that our roles as "mothers" render us "unprofessional." Women can make a statement by breastfeeding their children wherever they happen to be, whatever they happen to be doing, to show others that breastfeeding is important and can be accomplished by normal women living in the real world. Women can continue to lobby for realistic maternity/nursing leave, and employment opportunities that allow them to care for their children at the same time. All women, whether breastfeeding or not, whether mothers or not, as well as all men, need to understand the importance, for all members of society, of nurturant child rearing practices.

This is not a male versus female issue; most of the outspoken critics of breastfeeding in public, and breastfeeding older children, are women, just as women are the ones clamoring for their right to have their breast size increased through surgery. Likewise, some researchers have suggested that breastfeeding advocacy represents a call for women to return to their "traditional," circumscribed roles as housewives and mothers. In this chapter, I explicitly reject this interpretation. Women should not have to choose between nurturing their children in the best possible way and pursuing other interests outside the home. Just as an earlier generation of women thought that they had to choose between having a family and having a career, today's generation of working mothers often think they must choose between breastfeeding their children and having a career, but it does not have to be that way. It is up to us to change the cultural context of breastfeeding, and of work, in the United States, so that breastfeeding is compatible with the modern workplace. Rather than concluding that an advocacy of breastfeeding means a return to the days of "a woman's place is in the home," one can argue that an advocacy of breastfeeding means a change in a culture's valuation of child rearing as an activity, and a change in the valuation of the important contributions that only women can make to the social reproduction of a society.<sup>16</sup>

We can teach fathers other ways to nurture and care for their children besides giving them a bottle. We can show them that their cultural beliefs about the sexual nature of women's breasts are cultural beliefs, not biological givens. Men need to know that however much sexual

pleasure they may derive from women's breasts, breasts were designed, first and foremost, to feed children. Every father can be taught that the long-term health of his spouse and children should overshadow his culturally taught sexual desires for access to his wife's breasts.

We can teach our sons that they should not judge a woman's character or sexual attractiveness on the basis of her breast size. We can teach our daughters to value their bodies, to have confidence in their bodies, and to not be ashamed of using their bodies as they were designed. We can make sure that children have many opportunities to see women breastfeeding, in many different contexts. We can answer our children's questions about breasts and breastfeeding in a forthright, practical, straightforward manner.

Finally, we can continue to combat the "culture of misinformation" that surrounds breastfeeding among medical professionals and the lay public. Medical students and other health professionals need general nutrition education, as well as specific classroom and clinic education in breastfeeding (Freed, 1993; Stanfield, 1984). If doctors do not know how to effectively treat a particular problem, they can refer their patients to the experts—La Leche League International, lactation consultants, or other local women who have experience breastfeeding—rather than just recommending weaning. Women need to have their problems with breastfeeding met with serious concern and treatment, from knowledgeable, experienced people. Women's and new parents' magazines can make available objective, accurate information about breastfeeding, not bow to the power of the infant formula industry.

I realize that what I am calling for constitutes nothing less than a cultural revolution. Just as women have held rallies and marches to "Take Back the Night," we can "Take Back Our Breasts." We can restore our breasts to their rightful place as the most important point of contact between mother and child after birth. We can do as much as possible to facilitate breastfeeding for all women, and to make sure that women have all the information they need to make informed choices about infant feeding. No child should have to settle for bottle-feeding because his mother thought it was "just as good." No child should have to settle for bottle-feeding because his mother thought she "didn't have enough milk." No child should have to settle for bottle-feeding because his mother thought breastfeeding would be painful, or could be done only in private. No child should have to settle for bottle-feeding because his mother was not allowed enough maternity leave, and/or could not find child care near her workplace. No child should have to settle for bottle-feeding because her father wants her mother's breasts all to himself.

The path to a "Breastfeeding Friendly" society is open before us. We have only to take the first steps.

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## NOTES

1. In some cases, inaccurate culture beliefs about how to breastfeed can even render breastfeeding unsuccessful. For example, if women are told to nurse for 5 minutes on each side, every 4 hours, and to give the baby a pacifier in between if she or he cries, then they soon find that they have a dwindling milk supply, sore nipples, and a baby with an improper suck, slow weight gain, and at risk for dehydration, brain damage, and death.

2. Research into the evolutionary origin of the mammary gland suggests that mammary glands evolved before viviparity, and the original purpose of early proto-lacteal secretions was to kill microbes in the nest and on the surface of eggs. Ingestion of the secretions by the young, once they had hatched, helped establish optimal intestinal flora in the young. Only later did the nutritional and immunological functions of lactation evolve, including the evolution of  $\alpha$ -lactalbumin from lysozyme, allowing the synthesis of lactose (Blackburn, Hayssen and Murphy, 1989; Blackburn, 1993).

3. The Mirabella article is accompanied by an explicit photograph of a plastic surgeon inserting a silicone-filled implant into a breast. A box on one page notes "For women thinking about implants, bigger isn't the most important issue. They want younger-looking breasts" (1991:108). On p. 106 are "before and after" photographs labeled "Above left: Before implant surgery to lift drooping breasts and, right, six months later." Yet to anyone familiar with breastfeeding and lactation, it is clear from the photographs that the implants have changed the breasts' appearance to mimic *lactating* breasts.

4. My source of inspiration for this analogy was William A. Haviland's comparison of Chinese foot-binding to North American corset wearing (Haviland 1994:501).

5. In this chapter, I have cited Ford and Beach (1951), *Patterns of Sexual Behavior* published in New York by Harper & Row, Publishers. Anderson cites Ford and Beach (1952), *Patterns of Sexual Behaviour*, published in London by Eyre and Spottiswoode. Caro (see below) cites Ford and Beach (1952), *Patterns of Sexual Behaviour*, published in London by Methuen. The Methuen edition was actually published in 1965, as a reprint of the 1951 Harper & Row edition. As far as I can determine, despite the discrepancy of dates of publication and spelling of the word "Behavior" in the title, these are all the same publication.

6. T.M. Caro, in his 1987 article "Human breasts: Unsupported hypotheses reviewed," continues the miscitation of Ford and Beach (1952) without reference to Anderson (1983). He writes: "Men often become sexually aroused when they view women's breasts (Schmidt & Siquesch, 1970) and when they touch them (Masters & Johnson, 1966), and this latter activity is a common precursor to sexual intercourse in a large number of societies (Ford & Beach, 1952)" (Caro, 1987:272-273, emphasis added). Either Caro is really citing Anderson misciting Ford and Beach, or else he has also, like Anderson, miscited Ford and Beach's published work to suit his own purposes.

7. It is possible that women varied genetically with respect to their enjoyment of breastfeeding, and that those who found breastfeeding pleasurable would have been more likely to practice it, and so would have had greater reproductive success than women who found it unpleasant and were therefore less likely to practice it. This would have resulted in a higher frequency of the alleles that coded for breastfeeding enjoyment in subsequent generations. However, this scenario is not inevitable. It is also possible that women uniformly found breastfeeding to be unpleasant, yet varied genetically with respect to their persistence in the face of discomfort. Those who persisted even when it was painful would still have enjoyed a reproductive advantage. This would have resulted in a higher frequency of the alleles that coded for persistence in breastfeeding in the face of discomfort. This scenario is just as likely as the first one.

8. To argue that breastfeeding has only one legitimate function, a nutritional one, is analogous to insisting that sexual intercourse has only one legitimate function, a procreative one. If the only legitimate function of sex is procreative, then why have sex unless the woman is ovulating and both partners wish her to become pregnant? In fact, it would be a lot less hassle if the woman used a semen donor and artificial insemination. Just as sex serves many functions besides the transfer of semen from male to female, so breastfeeding serves many functions besides the transfer of nutrients from mother to infant. See Weichert (1975) for a similar discussion.

9. The images found in a La Leche League International brochure titled "Can Breastfeeding Become the Cultural Norm?" (Gotsch, 1989) serve as a contrast to those presented in the infant formula literature. La Leche League International is the network of breastfeeding women who provide information and support to other women who want to breastfeed their children, often against

great pressure from their family and friends not to breastfeed. In the brochure, women are shown in a park, in a mall, and dressed at home, nursing their children. The women are dressed in regular clothes, and are out in the world. For many years La Leche League's only advice to working mothers wanting to breastfeed was "try to stay at home." Over the last decade, La Leche League has begun to provide support and information to working mothers, and has taken a more active position in encouraging mothers to continue breastfeeding when they go back to work.

10. Marsha Walker writes: "Few parents are aware that hazards exist with artificial feeding. Health care professionals dodge the issue of the differences between formula and breast milk by not informing parents of the hazards of artificial feeding. The excuse is that this information might make bottle-feeding mothers feel guilty. This paternalistic view seeks to protect women from knowing the possible consequences of making "poor" choices for themselves and their infant, and robs parents of the right to informed decision-making. Withholding information generates more anger than guilt in parents when they find out that there really is a difference" (Walker, 1993:103).

11. See Dettwyler (Chapter 2, this volume), for a critique of the misinformation provided in one particular popular magazine article purportedly promoting breastfeeding.

12. Joel Achenbach, in his newspaper column "Why Things Are," writes of smoking: "Maybe cigarette smoking will turn out to be a strictly 20th century fashion, like jousting in the 11th century, or dying of plague in the 14th. Our guess is that within a quarter of a century smoking will be considered a bizarre and antiquated behavior" (The *Bryan/College Station Eagle*, July 31, 1994).

13. Van Esterik (1994b) makes a similar suggestion for mothers in the hospital.

14. In the children's book *Little Rabbit's Baby Brother*, by Fran Manushkin (1986), Mother Rabbit lays in a supply of bottles and formula in preparation of the new baby's arrival. Of course, the baby rabbit also wears "Happy Hare Diapers." The implication is that when rabbits act like humans, they feed their offspring with infant formula using a bottle. Van Esterik cites other popular media examples promoting bottle-feeding (1994b).

15. See Chapter 2 as well as the chapters by Fildes (Chapter 4) and Stuart-Macadam (Chapters 1 and 3), this volume, for documentation and further discussion.

16. Van Esterik (1994a:4) makes a similar point: "Some feminists have criticized breastfeeding advocates, arguing that they want to tie women down, and keep them at home to feed babies and change dirty diapers. This is not the case. Women's groups need to make sure that their efforts on behalf of breastfeeding are not used by traditionalists and conservative policymakers against women's interests." Van Esterik has written most eloquently on breastfeeding and feminism and breastfeeding and women's work (see Van Esterik 1989, 1992, 1994a, b, c, 1995, and Chapter 6, this volume. She is currently examining why breasts and breastfeeding are most notable by their absence in current feminist literature, as well as the links between breastfeeding and women's empowerment.

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