

# **The Paradox of the Insufficient Milk Syndrome: Why So Many Contemporary Women’s Attempts at Breastfeeding Fail**

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The contemporary medical community generally recognizes breastfeeding as the most healthful infant feeding option.<sup>1</sup> Established collaboratively by the World Health Organization and UNICEF, the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding recommends “exclusive breastfeeding from birth through four to six months, continued breastfeeding in the second year; appropriate weaning foods at about six months” (Obermeyer and Castle 1997: 40). Despite this recommendation, less than one-fifth of mothers in both the developed and the developing world exclusively breastfeed their infants for the first six months (Obermeyer and Castle 40). This marked discrepancy between the recommendation of international health authorities and the reality practiced by most women around the world seems most attributable to a decrease in the duration of breastfeeding, not to a major decrease in the number of women initiating breastfeeding. This very simple point, as fundamental as it is, is largely overlooked in the literature on breastfeeding.

The most common reason given by mothers for early discontinuation of breastfeeding is the “perception that their milk is insufficient to satisfy their infant’s needs” (Obermeyer and Castle 42), a phenomenon now termed the “insufficient milk syndrome” or IMS. The insufficient milk syndrome can only be understood in the context of fundamental changes in the breastfeeding process undergone by

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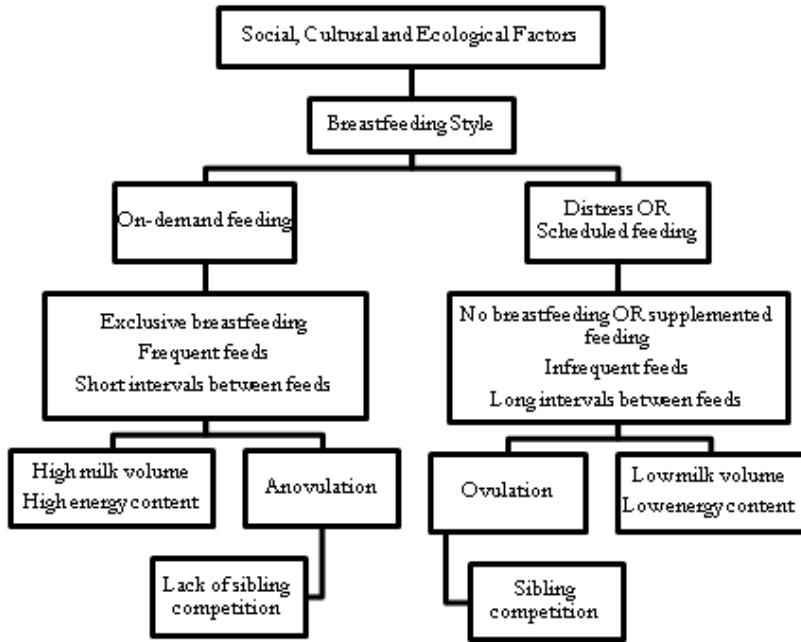
women who live in industrialized societies.<sup>2</sup> A whole host of social and cultural factors have altered the circumstances of breastfeeding in this social context, and this has led to a shift away from on-demand feeding of the infant. On-demand feeding is used in this paper to describe a style of breastfeeding involving close proximity between mother and child that allows the child to dictate its own feeding schedule. This feeding style has been the norm for most of human history. Thus, this author would like to posit that the ability of women to breastfeed on-demand is directly correlated with duration of milk sufficiency.

### **Breastfeeding Style**

On-demand is one specific style of breastfeeding. The three infant feeding styles that will be explored in this paper include on-demand, distress, and scheduled. The first, on-demand, is described in the left hand column of the graph below. Distress and scheduled feeding are modern permutations that are characterized by the description in the right hand column. This chart is reprinted here in full from the article “Sociocultural Aspects of the Lactation Process” (1995) by Sara A. Quandt.<sup>3</sup>

Breastfeeding style is a term that has come to represent the key behaviors that affect “milk volume, milk composition, and maternal reproductive status” (Quandt 131). These different “styles” are shaped by social and cultural factors and can have a drastic impact on “the initiation and duration of breastfeeding, the spacing and frequency of breastfeeding episodes, and the role other foods play in the infant’s diet” (Quandt 131). The conditions of contemporary life seem to be impacting a great many of these variables; women are breastfeeding for shorter periods at more spaced out, scheduled intervals and are weaning earlier. Figure 1 above illustrates the potential risks for infants that are fed in these new styles, distress and scheduled.

The right hand column reflects many contemporary behaviors that would be expected to lead to insufficient milk. This diagram is not used with the intention of implying that there are merely two paths breastfeeding can take. Different combinations of behaviors can lead to insufficient milk, but there are certain patterns that have emerged in the contemporary world that seem especially likely to lead to the syndrome. This paper will specifically distinguish among on-demand, distress, and scheduled feeding styles.



For the purposes of this paper, feeding on-demand means following a pattern that gives the infant relatively constant access to the breast. The widespread use of the term “on-demand” feeding does not describe a uniform behavior; it has been used in drastically different contexts and it does not necessarily imply a more time-intensive style of feeding. A commonly held misconception regarding on-demand breastfeeding is that the mother *must* stop whatever she is doing and meet the needs of the child whenever prompted, which is simply not the case. In some contexts the infant has almost complete control over the process in that they have easy access to their mother’s breasts and can simply guide themselves to them whenever necessary. In other contexts the mother may make only slight adjustments in positioning the infant and making her breasts available but does not have to stop other activities in which she is engaged. In yet other contexts breastfeeding does in fact demand that the mother stop her activity and devote a portion of time exclusively to breastfeeding. Thus breastfeeding “on-demand” has different implications in different cultural contexts and, due to

such variables as proximity between mother and infant and the degree to which the infant controls his or her own access to the breast, the actual amount of time spent suckling varies. Vis and Hennart (1978), for example, consider two different situations:

in the industrialized countries, “on demand” means that the infant is breastfed each time that he cries, this is to say, when he is hungry. By contrast, in developing countries, as in rural Kivu, the infant, who is always with the mother, reaches for the breast when he wants to feed. . . . “On demand,” in the former case, results in 6 feedings per 24 hours, while in the latter case. . . the average number of feedings is on average 13 times a day. (qtd. in Gussler and Briesemeister 1980: 156)

The two situations above, which are both commonly called “on-demand,” lead to very different outcomes; in order to distinguish between these two “styles” this paper will utilize the term “on-demand” to characterize specifically the type of infant-guided feeding style that involves close proximity between mother and child. The other type of feeding described above (sometimes also called “on-demand,”) will be termed distress feeding for the purposes of this paper. The third style of infant feeding that will be explored is scheduled feeding, in which the infant feeds on a set schedule independent of distress cues.

The difference between on-demand and distress feeding is not minor. Distress feeding implies that the infant has surpassed a level of slight discomfort and hunger and has become severely agitated. There is an assumption in the West that crying is a natural part of life and the most obvious cue for hunger. This is simply not the case because crying is *not* the natural cue for hunger and breastfeeding. While babies cross-culturally begin to whimper at the same rates there is tremendous variation in the duration of crying. Simply put, Western babies cry longer per bout and spend more total time crying per day (Small 1998: 154). In Western cultures or those that have adapted Western customs, parents choose

a more independent relationship from their babies. They choose to place babies in cribs and car seats rather than carry them all the time, to feed babies in intervals rather than continuously,

and to respond less quickly to infant distress. Although this style provides parents with some freedom from the demands of the infant, it also comes with a cost- a crying baby who is not biologically adapted to the cultural change. (Small 155)

Implicit in the central assertion of this paper, that milk sufficiency correlates with duration of on-demand feeding, is the assumption that undermining a biological process based on a complicated feedback mechanism necessarily produces biological repercussions. It is my hypothesis that distress feeding and scheduled feeding lead to higher incidences of insufficient milk because they deviate from the biological norm of on-demand feeding.

### **On-Demand Feeding as Our Naturally-Evolved Pattern**

Research on the composition of human breast milk, the rate of infant sucking, and the social behavior in traditional societies indicates that the on-demand style of breastfeeding represents the natural mode of infant feeding for our species (Shaul 1962; Kennell and Klaus 1979; Lozoff and Brittenham 1979). Studies of the evolution of mammalian lactation have revealed that the adaptation and food procurement strategies of mammals are highly linked to the animals' milk composition (Gussler and Briesemeister 151). The biologist Ben Shaul has divided mammals into five types, with each type comprising animals with similar adaptational strategies and corresponding milk compositions. Lions, for example, are categorized by Shaul as belonging to group III. The lioness must leave her cubs for long periods while she hunts. Her milk is thus highly concentrated and high in fat so that her cubs can survive without her milk for long periods. Primates belong to group II, which consists of animals that have their infants continuously close by and thus have a milk composition that is "rather dilute, with a low fat and protein content" (Gussler and Briesemeister 151). Dilute here does not mean anything negative about the quality of the milk; it merely implies a lower concentration of energy and nutrients indicative of the need for the infant to consume the milk more frequently. Like other primates, humans have evolved a relationship of close, relatively continuous contact between mother and infant.

Marshall Klaus and John Kennell (1979) have found that the

rates of infant sucking are indicative of appropriate feeding intervals. Human infants suckle at a relatively slow rate, which again indicates the need for near continuous contact between mother and child. Thus, “the feeding pattern of continual suckling is congruent with the chemical, anatomical, and physiological characteristics of the milk and the nursing dyad” (Gussler and Briesemeister 154). The mother will supply the comparatively “dilute” human milk to the infant as needed, which is quite frequently, as the longest interval between feedings of the infant is usually only twenty minutes; this is assuming the infant completely dictates the feeding.

The San, well-known foragers of the Kalahari, are often used to illustrate the upper extreme of weaning age among foraging and other kin-organized societies. Many children are not weaned until they are four or five years old. San women clearly demonstrate the on-demand style of breastfeeding since “babies stay with their mothers at all times” and sit in a sling “hung on the mother’s hip, not on her back, and so the baby has good access to the breast... it is up to the baby to manage its feeding by holding on to the breast and sucking whenever it is hungry” (Small 81-82). Physical contact with the mother thus seems an integral part of this truly on-demand style of feeding. Children among the Ache, a foraging people from Paraguay, are carried on their mother’s back in a sling and also suckle whenever they choose. This is possible because “during the first year, infants spend 93 percent of their daylight time and 100 percent of night time in contact with their mothers” (Small 88).

A similar situation can be found among kin-ordered peoples with more intensive modes of adaptation. The Dogon, an agricultural people in Western Africa, provide another example of how on-demand feeding requires physical proximity between mother and child. According to Paulme and Shutze, Dogon babies almost never leave their mothers:

during the day, while the woman pounds the millet for the meals, goes to draw water or to work in the fields, the child sleeps astride her back; at night it sleeps beside her. The comparison with a little marsupial... is more justified, during the first months, than one with a baby of our civilization, lying in its cradle or in its carriage, away from its mother. The needs of the little Dogon

are satisfied at once: there are no fixed hours for meals; as soon as the child cries, its mother gives it the breast. (1940: 416)<sup>4</sup>

There is much variation among traditional, kin-ordered societies in regards to weaning and infant feeding patterns. Women are engaged in a variety of subsistence activities, some of which lend themselves to simultaneously carrying children and nursing them, while others are less compatible. It is often the case that mothers will stop lactating or have significantly reduced milk production before they have totally weaned a child. Anthropologist Patricia Draper recalls one San mother: “N!oshe, and her son, Kan//ka, who was then about 4 years old. The child was still nursing, though infrequently. I wondered how much if any milk Kan//ka was getting. When I asked N!oshe if her breasts still had milk, she answered, ‘No, when he nurses he just swallows his own saliva’” (1976: 215). This indicates the fact that many women will naturally have a diminished milk supply as their child relies less and less on their mother’s milk to meet their caloric needs, and this diminished milk supply does not necessarily mean that the mother has stopped breastfeeding on-demand; it could simply mean that the child’s demand has decreased to a level that undermines the continued lactation of the mother. In her work with Palestinians, Lutfiyya highlighted two key factors in determining how long an individual mother in a kin-ordered society will be able to continue to breastfeed on-demand. “The period of breast feeding might be shortened or prolonged depending upon many factors,” she argues, “including the pregnancy of the mother and the type and amount of work demanded of her” (1966: 157). Along with women’s traditional work and a new pregnancy, major social changes such as a shift in subsistence or residential pattern are some of the most crucial factors in determining the breastfeeding environment of a mother-child pair.

Although kin-ordered societies vary substantially in terms of infant feeding practices, the really stark contrast is that between kin-ordered societies and contemporary market based systems. This contrast is especially noticeable when one examines the processes of social and cultural change within traditional societies. Infant feeding practices are often one of the first behaviors to change as a culture itself changes. In their work with the Chuuk of Micronesia Leslie and Mac Marshall capture how modernization can drastically transform

traditional cultures:

Approximately two-thirds of the sixty women who had used bottles at some time offered comments on why they had done so... Over one-third of these respondents of all ages stated that they prepared bottles for their infants when they needed to get away from the house, do chores, or visit, conduct business downtown, or sleep. Another third of the respondents (all of whose children had been born in the past ten years), replied that they held full-time salaried jobs or were full-time students and could not care for their children during the day. (40)

It is important to note that this paper focuses on the two extremes of breastfeeding practices: those of foragers like the San and those found in industrialized societies. This is not, however, intended to imply that these polar extremes are the only two scenarios; they are merely used to illustrate how far the contemporary practices found in industrialized societies have deviated from our biologically, evolved behaviors. The process of production intensification and its associated increasing demands on time have been going on since the emergence of humankind as a species; horticulturalists can thus be conceptualized as an intermediate category between foragers and industrialized peoples and would be expected to exhibit behaviors between the two extremes. This does seem to be the case to some degree with weaning and infant feeding practices since horticulturalists tend to wean earlier than foragers. These differences are much less significant though when compared to the incredible shift in behaviors of infant feeding found in the industrialized world. The Dogon, while agriculturalists, have more in common with their foraging counterparts the San than with people participating more fully in the industrialized world.

### **Barriers to On-Demand Feeding in the Industrialized World**

Gussler and Briesemeister have noted that “any behavior or object that puts distance between the mother and infant and/or increases time between breastfeeds may produce a hungry baby and interfere with lactation” (161). There are a whole host of factors that have fundamentally altered the circumstances of breastfeeding in the modern world, making it very difficult for women to breastfeed on-



demand and likely leading to the insufficient milk syndrome. Most of these factors, however, seem to stem from one prominent feature of contemporary life: women's integration into the wage-labor system, which is an essential feature of capitalist production. These factors include but are not limited to women's wage work outside the home, physical barriers of space and clothing, corporate marketing, and the medicalization of the breastfeeding process.<sup>5</sup>

Various channels can lead to insufficient milk in the contemporary world. There are really two simultaneous phenomena occurring in the modern context: higher incidences of *actual* milk insufficiency as well as higher incidences of *perceived* insufficiency. The perception can actually lead to the reality. Women are in many ways conditioned to expect insufficient milk, which in turn can undermine their confidence in their ability to breastfeed successfully. This can then produce elevated levels of anxiety in the breastfeeding mother, which inhibits the let-down reflex necessary for milk production (Gussler and Briesmeister 158). The following sections will explore four major barriers to on-demand feeding in the contemporary world and the various ways they contribute to increasing incidences of insufficient milk.

### **Maternal Employment**

Jobs outside the home frequently necessitate a clear distinction between a woman's domestic work, which would include breastfeeding, and her "job," which is done for income. This distinction is virtually non-existent in most kin-ordered societies. Obermeyer and Castle note that "many women in agrarian societies tend to have heavier physical workloads and spend longer proportions of the day engaged in household duties, and yet, they breastfeed more frequently and for longer durations than women in many developed countries. If a woman can work while carrying her child, she is not required to separate her breastfeeding and productive activities" (45). When a woman works for an hourly wage, however, she is often expected to devote her time exclusively to her employer, and any distractions, including breastfeeding, mean a drop in the woman's productivity and generally are not tolerated. In Bangladesh, urban women working as garment factory workers, hospital workers, or domestic servants were much less frequently seen working while suckling a child than their rural counterparts employed primarily in agriculture. In the urban

environment, in fact, many of the women's employers specifically did not allow infants at the workplace (Zeitlyn and Rowshan 1997: 63). It seems to be the case that wherever "women are employed outside the home, exclusive breastfeeding is difficult to maintain for long without a major reorganization of the workplace and substantial changes in labor policies" (Obermeyer and Castle 46).

Dettwyler has noted that whether breastfeeding is compatible with women's work largely depends on cultural beliefs related to the appropriate context for breastfeeding one's baby. "If breastfeeding is defined as a 'private' activity," she argues, "and work involves 'public' or 'professional' contexts, then breastfeeding *becomes* incompatible with women's work by cultural definition" (193). Laura Lindberg has examined this issue of compatibility in the context of the United States and has found that many mothers do indeed experience role conflict or role incompatibility between their simultaneous pulls to be a "good" mother and a successful employee (1996: 240). Lindberg also found that women were more likely to stop breastfeeding the month they returned to work, suggesting that resumption of maternal employment presents a real challenge to continued breastfeeding (239).

### **Physical Barriers**

Physical barriers to on-demand breastfeeding in modern life, most notably clothing and space between infant and mother, are important in the distinction between on-demand feeding and distress feeding. Judith Gussler and Linda Briesemeister point out that "modern" infants

are rarely carried skin-to-skin, so that subtle changes in infant's behavior, restlessness, and agitation are not longer cuing mother of growing hunger. If the child is in another room, the first cue may be a real cry. In fact, the infant may cry for so long that it is fatigued before the feeding occurs. Mother's clothing (especially if she wears a brassiere) and mother's activities (which now may separate her further from the child) will inhibit the feeding response. (155)

The infant is no longer in a position to guide his or her own feeding because the breast is covered and the infant is not likely to be in direct

physical contact with its mother. As a result, the mother may in fact not notice the infant's desire to feed until its state has gone from subtle discomfort to outright distress. This situation results in fewer feedings with longer intervals in between, thus increasing the risk of insufficient milk. Gussler and Briesemeister discuss the likely consequence, observing that the "greater the distance from the baby and the greater the time period between feedings the less likely the mother is to continue nursing" (163). This relationship between distress, physical distance between mother and child, and the resulting number of feedings is extremely important. Quandt argues that Euro-American mothers in the United States who live in smaller houses "breastfed more times per day, with shorter intervals between feedings" (133). Naggan et al. found house type among Bedouin Arabs in Negev to be correlated with duration of exclusive breastfeeding (qtd. in Quandt 133). Although the authors attributed the variation to differences in traditional versus modern values, it still is quite noteworthy that house size and presumably space between infant and child could have such an effect on breastfeeding. Space between the mother and child undermines both the infant's ability to dictate when it feeds and also the ability of the mother to simultaneously breastfeed and engage in other activities.

The clothing issue cannot be separated from ideas regarding the sexuality of the breast and whether breast exposure is considered appropriate. It is unclear whether Western culture has uniquely hypersexualized the breasts or simply become intolerant of the exposure of an inherently sexual part of the anatomy in a public, professional space. In their work on Bangladesh, Zeitlyn and Rowshan have established that "in the city, notions of female modesty are redefined," perhaps in some part due simply to the fact that women are no longer surrounded by their relatives but instead by unrelated strangers in comparatively tightly packed dwellings (63).

Regardless of why it is the case, much of the contemporary world condemns breast exposure in public, which makes it difficult for women to coordinate their public life with breastfeeding and is a noted disincentive to breastfeed at all. Anglo mothers in the U.S. are most likely to conceive of breastfeeding as an inconvenience (22%) and as embarrassing (24.9%) compared to Jamaican and Mexican-American

mothers (Tully and Dewey 1985: 235). In an American survey designed specifically to study barriers to breastfeeding and its continuation, 42 % of the women “mentioned modesty or embarrassment as the primary reasons they had not started breastfeeding or had weaned” (Obermeyer and Castle 54). Not only does a woman face potential social stigma for breastfeeding in public, but she may also risk getting arrested. A woman was in fact arrested outside the JFK Center for Performing Arts for breastfeeding her infant, and this is not the only account of such an arrest (Simopoulos 1984: 608).

### **Corporate Marketing and Formula**

Corporate marketing and the ready availability of formula have also been significant obstacles to on-demand breastfeeding. Ted Greiner, Patty Van Esterik and Michael C. Latham note that “whereas mothers usually are not introducing the bottle with the intention of replacing breast milk, let alone terminating breast feeding, statistically bottle feeding would appear to have this effect” (1981: 239). Bottle feeding can thus inadvertently lead to insufficient milk. One cannot, however, simply blame the formula companies for creating an artificial product that has undermined a biological process. These companies were responding to a demand, although they in many cases aided in creating said demand. The use of formula cannot be entirely separated from the issues of women’s work and conceptions of women’s breast exposure which have helped shape a demand for an inexpensive alternative to breast milk.

The formula companies have fueled certain perceptions of their products through marketing. Infant food advertising campaigns have included catch-phrases such as “when breast milk fails” and “when nature is inadequate” (Greiner, Van Esterik and Latham 240). These types of campaigns undermine women’s confidence in the breastfeeding process. It is in the best interest of the infant formula companies 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” (Dettwyler 190). Corporate marketing can cause women to become anxious about their breast milk and precondition them to perceive any setbacks as insufficient milk. Both anxiety and the perception of insufficient milk can lead to an actual milk insufficiency. In the developing world, formula can

also sometimes be seen as a status symbol. Zeitlyn and Rowshan in their work on Bangladesh noted that in the house of baby Sumon “the tin of powdered milk and the feeding bottle were proudly displayed beside the china in the dresser and signified the anxious parents’ desire to do their best” (60).

Women may also turn to infant formula if they become convinced that breastfeeding is too time intensive, especially when coupled with the belief that formula can provide a nutritionally equivalent substitute to mother’s milk. Even calling artificial breast milk products a “formula” has been cited as one way companies have been able to validate their own product. The term “formula” would seem to reduce breast milk to its basic chemical makeup and suggest that if one can approximate this makeup artificially, then the substitute would be just as sufficient as the original. This is, however, decidedly not the case. Even after decades of research, infant formula is still not as healthful of an infant feeding option as breast milk (Cunningham 1995: 255). Corporate marketing also tends to focus solely on the nutritional value of formula, almost never acknowledging the role played by breastfeeding on the psychological and emotional well-being of the infant and mother. Infant formula has also been marketed to health professionals and hospitals in an attempt to channel these products to mothers from a trusted source. Already by 1910 some infant formula companies had shifted some of their marketing to physicians. Van Esterik documents that many

pediatricians recognized the dangers of artificial feeding of infants, but these dangers simply increased the need for medical supervision of the task and strengthened the relation between industry and the medical profession. (1989: 118)

This relationship between infant formula companies and the medical profession continues today. Obermeyer and Castle have noted that many health professionals continue to promote infant formula and supplementary foods. Companies give free sample packets to hospitals and other incentives that are hard to turn down (Obermeyer and Castle 47).

**Medicalization of Breastfeeding**

Another barrier to on-demand feeding in the contemporary world that is in some ways inseparable from corporate influence is the role of the medical community in women's decisions regarding infant feeding. Van Esterik has noted that "the jurisdiction of the medical profession has expanded to include infant feeding in both developed and developing countries. It is now taken for granted that anything affecting infant health belongs in the medical domain" (111). Advice from medical personnel has largely come to replace that of female kin and other women from the mother's social world. Breastfeeding has become such a private activity that many mothers may never have been around another woman breastfeeding her child. There is little question that this powerful new influence of the medical community on women's breastfeeding behaviors acts as a major barrier to on-demand breastfeeding and a successful breastfeeding experience. Obermeyer and Castle note:

one factor that has been shown to strongly influence breastfeeding is the type of contact with health professionals that mothers have at the time of birth. In a comparative study of breastfeeding in Thailand, Colombia, Kenya and Malaysia, Winikoff and Castle found that the proportions of women who breastfeed at least three months are higher if women deliver at home or if rooming-in is practiced at the hospital. These proportions are lower where the birth is attended by a physician or if a sample of formula is given. (46)

The medical community is most responsible for promoting the scheduled feeding of infants. Feeding infants on a schedule most certainly results in fewer feeds than on-demand, and less frequent feeds directly leads to insufficient milk. In a comparative study by Julia Tully and Kathryn G. Dewey, the authors found "a tendency [among Anglos] for mothers who nursed less than once every three hours in the first two weeks to be more likely to complain of insufficient milk than those who nursed at least every two hours (45.5% vs. 19%)" (239).

Another element of the breastfeeding process that has changed in contemporary times is that women now receive much of their knowledge about proper breastfeeding procedure from medical

personnel. Public campaigns in Bangladesh that are mostly crafted by physicians generally treat women as ignorant of the proper way to breastfeed. In their research, Sushila Zeitlyn and Rabeya Rowshan have found that “literature produced by such campaigns treats breastfeeding as a physiological phenomenon to be ‘managed,’ promoted, legislated, researched, and supervised by a hierarchy of experts who must be trained to train mothers on the ‘proper’ methodology” (58). This can undermine women’s confidence in their ability to breastfeed independently and therefore contribute to the likelihood of women experiencing insufficient milk.

When mothers come to health care professionals with claims of milk insufficiency, the health care industry often recommends supplementation, which is entirely counter-productive to successful breastfeeding especially given that it has been demonstrated that breastfeeding *more often* is the best way to increase milk production. “There is a tendency in modern medicine,” according to Obermeyer and Castle, “to seek solutions for problems at the next higher level of technological sophistication, even when an equally good or better solution can be found at the next lower level of technology” (47). In a study of rural Malawi in 1993, Castle found that the most common problem related to breastfeeding was insufficient breast milk. What is most noteworthy about the study, however, is the fact that *all* of the health care workers attempted to remedy the problem by encouraging the mothers to turn to supplemental food sources for their baby as opposed to continuing to breastfeed (Castle 1993). In a study by Julia Tully and Kathryn Dewey, women who had perceived insufficient milk and sought out advice from medical personnel were reported as likely to turn to the bottle as a “solution.” It was found that “after perceiving insufficient milk, 67 percent of mothers in the present study began supplementary bottles” (240).

## Conclusion

In this paper I have argued that women are only able to produce sufficient breast milk for as long as they practice an on-demand style of breastfeeding. Deviations from this evolutionarily pre-determined norm for the human body increase the likelihood of experiencing insufficient milk. The increasing incidence of the insufficient milk syndrome in the contemporary world can be traced to various barriers



to on-demand feeding including maternal employment, the physical barriers of space and clothing, corporate marketing strategies, and the medicalization of the breastfeeding process.

The increasing dependence on formula as a form of sustenance for infants in the contemporary world is also potentially very risky; it is in many ways a collective gamble that we may ultimately lose, albeit in a variety of subtle ways. Cunningham has noted that “low-protein human milk is the tortoise of mammalian growth and development, intended for a slow-growing, long-living species... Feeding animal milk and formulas to human infants accelerates their physical growth, but... it also leads to infections, intellectual deficits, and chronic disease” (252-53). While artificial milk substitutes have proven somewhat adequate in the industrial world, in many countries with poorer infrastructure and limited access to clean water, the introduction of formula has led to catastrophic consequences for infant health. This is yet another reason to encourage the safer and healthier practice of breastfeeding. The unique composition of human breast milk is not something that will ever be replicated artificially. By not tapping into this free and valuable resource, we may be losing significant health benefits. Breast milk has relatively recently been posited as having cancer fighting abilities, and who knows what other incredible properties have yet to be discovered about this natural form of wisdom.

## Notes

<sup>1</sup> Under normal circumstances breastfeeding is most definitely the best, healthiest infant feeding option. However, the contemporary and tragic realities of environmental toxins and AIDS have colored the discussion. Both of these health hazards to the mother have the potential to be transmitted to the infant through breast milk (Cunningham 1995).

<sup>2</sup> The phrase “women who live in industrialized societies” is used here and throughout this paper to describe women who have become integrated into the greater global economic system; that is, women who are living more urban, “modern” lives as opposed to a more “traditional” lifestyle.

<sup>3</sup> I have added the categories below breastfeeding style: “On-



demand feeding,” and “Distress or scheduled feeding.”

<sup>4</sup> It is important to note that the Dogon discussed here are indeed the well-studied Dogon of Mali; here they are referred to as Sudanese because Mali was at this time (1940) known as French Sudan.

<sup>5</sup> Another contributing factor to the increasing incidence of “insufficient milk” in the contemporary world that has been discussed in the literature is the hyper-sexualization of the breast associated with the West and Westernization. Katherine A. Dettwyler explores this concept in her article “Beauty and the Breast: The Cultural Context of Breastfeeding in the United States” (1995). This concept is briefly addressed in the “Physical barriers” section of this paper but was not given as much weight as the four major factors because this author did not consider it as significant as the other factors discussed.

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