

Syracuse University

SURFACE

Anthropology - Faculty Publications

Maxwell School of Citizenship and Public
Affairs

2003

Invoking Vali Painful Technologies of Modern Birth in South India

Cecilia Van Hollen
Syracuse University

Follow this and additional works at: <https://surface.syr.edu/ant>



Part of the [Anthropology Commons](#)

Recommended Citation

Van Hollen, C. (2003). Invoking Vali: Painful technologies of modern birth in South India. *Medical Anthropology Quarterly*, 17(1), 49.

This Manuscript is brought to you for free and open access by the Maxwell School of Citizenship and Public Affairs at SURFACE. It has been accepted for inclusion in Anthropology - Faculty Publications by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.

This is an author-produced, peer-reviewed version of this article. The published version of this document can be found online in *Medical Anthropology Quarterly*. (<http://www.maxwell.syr.edu/uploadedFiles/moynihan/sac/Van%20Hollen,%20Invoking%20Vali%20Painful%20Technologies%20of%20Modern%20Birth.pdf>) published by *Anthrosource – American Anthropological Association*.

Invoking *Vali*: Painful Technologies of Modern Birth in South India

Cecilia Van Hollen, Syracuse University

As reproduction becomes increasingly biomedicalized throughout the globe, reproductive technologies are used in unique ways and imbued with different meanings. This article explores why lower-class women in south India in the 1990s were demanding to have childbirth labors induced with oxytocin drugs while rejecting anesthesia. Cultural constructions of women's reproductive power are evoked and reworked in discourses of modernity that explain this preference. Discourses on relationships among gender, pain, and modernity relate to political-economic constraints on hospitals to perpetuate this practice. [modernity; reproductive technologies; gender; India]

The first time I visited Nochikuppam in 1995, Kasthuri, a health worker for a local women's organization, summoned a group of pregnant and postpartum women from the neighborhood to gather to meet with me in a dank room on the ground floor of her government-subsidized housing complex. Nochikuppam is a low-income community in Chennai (formerly known as Madras), the capital of the south Indian state of Tamil Nadu. We were well into a discussion about women's childbirth experiences when I asked whether women choosing hospital births were given any medication to reduce the pain. "Oh, yes," they all agreed. "They give us injections and 'glucose drips' and then the pains come and the baby will be born right away." I was sure that my Tamil had failed me and that I had not asked the question properly, so I asked my research assistant to pose the same question again. And still the women responded with the same answer. When we asked a third time and underscored that we wanted to know about medicines to *decrease* rather than increase the pain, we were met with baffled looks. "The baby will only be born if the pains are strong," they explained. Nagamma, an elderly *maruttuvacci* (hereditary midwife) joined in, saying, "When you are grinding, it is only if you go on grinding and grinding that you will get a good paste. Like that, without pain how will you deliver a baby?"

Wherever I went in Tamil Nadu, I encountered precisely the same response to my question—a misunderstanding followed by a sense that the premise of the question itself was incredible. In fact, I discovered that it was common for women giving birth in government hospitals to have their labor induced and accelerated with oxytocin drugs called epidocin and sintocin. Like pitocin, which is used in the United States, these drugs simulate the effects of oxytocin, a naturally produced hormone. Epidocin helps relax the uterine muscle and dilate the cervix, and sintocin works to amplify the contractions. What was most surprising to me was the fact that women themselves believed that this was the preferred way to deliver a baby. When I asked a doctor from a public hospital in Chennai whether women sometimes ask to have their labor induced, she replied (in English), "They don't ask; they insist! Given the choice, everyone wants to be induced." This remark was supported by my observations and discussions with women in maternity wards throughout Tamil Nadu. Women sometimes evaluated different hospitals on the basis of how readily the staff would induce labor. And one nurse told me that she had even been compelled to give women placebos to satisfy their demands when it was medically dangerous to induce labor. The practice of medically inducing labor was not confined to hospitals alone. Vitamin B 12 injections as well as stronger oxytocin drugs were increasingly being administered for home births, too.

Why had the use of drugs to induce labor pains become so normalized in urban and some rural parts of Tamil Nadu in the 1990s? And why did the use of analgesics to reduce the pain of birth seem to be such a far-fetched concept to lower-class women in Tamil Nadu? This article addresses these twin questions and underscores the fact that as birth becomes increasingly biomedicalized throughout the globe, modern medical technologies may be used in different ways and be given different meanings in particular contexts. In Tamil Nadu, cultural notions about women's power, local constructions of the body, and traditional medical practices to induce labor pains all combined with political-economic limitations of large government maternity hospitals to make inducing economically efficient and to render the use of analgesics to reduce labor pains an unaffordable luxury.

My initial surprise at the treatment of pain during childbirth in Tamil Nadu, of course, reflects my own cultural presuppositions, given that medicalized births in the United States exhibit the opposite trend, with women opting for routine use of analgesics (particularly epidurals) and dreading the prospect of having their labors induced with pitocin, which intensifies the pain. Numerous feminist anthropologists, sociologists, and historians of medicine have analyzed the social and cultural contexts that gave rise to this particular form of medicalization in the United States (Apple 1990; Davis-Floyd 1992; Davis-Floyd and Sargent 1997; Ehrenreich and English 1973; Ginsburg and Rapp, eds. 1995; Jordan 1993; Leavitt 1986; Martin 1987; Oakley 1984; Reissman 1983; Russett 1989; Smith-Rosenberg 1985). Because this literature is extensive and has received much attention, I do not review it here. A few key issues, however, are critical to mention for the purposes of this discussion.

The dominant biomedical model of birth in the United States traces its roots back to the emergence of the medical profession during the Enlightenment era of the 18th and 19th centuries, when female midwives assisting deliveries at home gradually came to be replaced by male "regular" doctors and, eventually, by obstetricians. Women's reproductive bodies and childbirth came to be viewed as always potentially pathological. Pregnant women were constructed as "patients" who needed to be managed by the medical establishment, and their bodies increasingly became the object of the "medical gaze" (Foucault 1973). In the United States the shift to birth in the hospital was essentially complete by 1960, at which time, Leavitt writes, "outside of some isolated rural areas, it was almost unheard of for American women to deliver their babies at home" (1986:171).

Also beginning with the Enlightenment era, Rene Descartes's theory of the fundamental duality of the mind and body and newly emerging capitalist models of production combined to construct a view of a woman's body during birth as a machine that would function automatically regardless of the woman's subjective experience. Therefore, it became conceivable for a woman to give birth without pain as long as a medical professional was on hand to monitor the machine and intervene in the event of malfunction or inefficient functioning. These machines then came to be judged by the medical establishment as efficient or inefficient based on normative production schedules, and technology was brought in to improve on "inefficient" bodies (Martin 1987; Oakley 1984; Osherson and Amarasingham 1981). From this point on, the endless search was on to discover new technologies to mask the woman's subjective experience of pain while ensuring that labor progressed in an efficient manner.

Many critiques of the U.S. biomedical model of birth argue that the technological interventions developed by the biomedical profession serve primarily to shift control over the birth from the mother to the doctor. The routine use of the lithotomy position, in which a woman gives birth while lying on her back with her knees raised up, is a prime example of this. Other critiques, however, have examined the ways in which women have both benefited and suffered from the medicalization of women's health. For example, Reissman (1983) and Leavitt (1986) look at women as engaged agents in the promotion of technologies used in reproduction. Reissman argues that by ignoring women's agency in the medicalization process, scholars only "perpetuate the kinds of assumptions about women that feminists have been trying to challenge" (1983:3). Of particular interest for this article are discussions of women's role in advocating for the use of analgesics during delivery, beginning in the mid-19th century when ether and chloroform were the first analgesics used by doctors during birth (Leavitt 1986; Miller 1979; Reissman 1983:6). In the second decade of the 20th century, the U.S. National Twilight Sleep Association, a middle- and upper-class feminist organization, was formed to demand the use of a combination of scopolamine and morphine to produce "twilight sleep," putting women in a state of amnesia so that after the birth they were unaware of having experienced any pain. Doctors often felt pressured to administer these drugs to satisfy the demands of their patients, despite the risks attached. As the dangers of these early anesthetic drugs became increasingly apparent, women's organizations began to mobilize against their use, but the movement had established that women had a fundamental right to painless childbirth (Leavitt 1986: ch. 5).

It wasn't until the middle of the 20th century that the "natural childbirth" movement began to gain momentum and to question the value of painless birth. This movement, in its various forms, has viewed pain as a natural part of the process of birth that can be managed through the use of specific breathing techniques, birthing positions, and psychological orientations, rather than pharmaceutical drugs.

Despite the fact, however, that the ideals of natural childbirth are embraced by some women in the United States, the use of anesthesia, particularly epidurals that suppress the experience of pain without altering women's consciousness and without completely taking away their muscle control, is on the rise and is fast becoming routine. The use of pitocin, which increases the intensity of the pain as it induces contractions, is dreaded by most U.S. women, who are rarely given the drug without simultaneously being given anesthesia to mask the pain. The inverse is also true. That is, the heavy use of epidurals and other analgesics has also led to an increased use of pitocin, because analgesics are known to slow down natural labor, thereby precipitating the need for pitocin or, possibly, a cesarean section (Davis-Floyd 1992; Jordan 1993). The routine use of analgesics is, therefore, obviously a result of cultural values rather than medical necessity.

Of course, the biomedicalization of pregnancy and birth in the United States is not as uniform as critics often make it out to be. For example, the way in which birth is managed varies on the basis of race, ethnicity, class, gender, and region. The same technological intervention may be interpreted, experienced, and acted on in different ways within the United States (Becker 2000; Martin 1987; Rapp 1991, 2000; Reissman 1983). Researchers dispute how one's socioeconomic status will influence the process of medicalization. Some argue that women in higher socioeconomic brackets will experience greater degrees of technological interventions, whereas others argue the opposite. 2 Recent reports suggest that Medicaid patients in the United States are sometimes not provided with epidurals (unless they pay for them themselves) because of the higher cost of administering such drugs compared with other analgesics, for example, Demerol (Pear 1999). There is also a great deal of variation in the dominant models of birth throughout the so-called Western world. Brigitte Jordan's (1978) seminal comparative study showed variation in modern obstetrics in three different Western nations: the United States, Sweden, and Holland.

In her more recent work, however, which examines the growing trend of biomedicalized birth in Third World countries, Jordan (1993) constructs "Western obstetrics" and "the biomedical view" as a monolithic entity that she refers to as "cosmopolitical obstetrics" and sees as colonizing the "ethno-obstetric system" and "the traditional view." Although such constructions serve important political strategies, they tend to detract from understanding the important historical and cultural permutations of the biomedicalization of birth globally. Jordan depicts a scenario in which modernity, biomedicine in particular, is transplanted around the globe rather than emerging locally.

But biomedicine is *not* a monolithic entity (Lock and Kaufert 1998:16). As reproductive processes become increasingly biomedicalized throughout the globe, researchers cannot assume that this process will occur in a uniform way despite the fact that the initial push behind the trend came in part from Western nations in colonial and postcolonial contexts. Ginsburg and Rapp, somewhat like Jordan, voice their concern that unequal relations of power in the process of globalization impact negatively on women's control over reproduction, leading to what they describe as the "stratification of reproduction on a global scale" (1995:12). Yet, at the same time, they caution against adopting unidirectional models of the relationship between power and knowledge in the context of globalization, observing that

While our work calls attention to the impact of global processes on everyday reproductive experiences, it does not assume that the power to define reproduction is unidirectional. People everywhere actively use their local cultural logics and social relations to incorporate, revise, or resist the influence of seemingly distant political economic forces. [Ginsburg and Rapp 1995: 1]

Indeed, medical anthropologists and historians interested in reproductive issues have recently begun to examine *diverse* meanings and uses of modern reproductive technologies throughout the world (see, e.g., Fielder 1997; Georges 1997; Ginsburg and Rapp, eds. 1995; Lukere and Jolly 2002; Ortiz 1997; Pigg 1997; Ram and Jolly 1998; Sargent 1982, 1989; Sargent and Rawlins 1992).

Historians and anthropologists have examined how biomedicine in India was not only indigenized but was also structured by the interests of empire and the postcolonial state (Arnold 1993; Bala 1991; Jeffery 1988; Lal 1994; Ram 1994, 1998, 2001 a, 2001 b; Ramusack 1996, 1997). In the area of reproductive health, issues of gender, race, class, rural/urban residence, caste, and cultural notions of purity and pollution have influenced the ways in which birth has become biomedicalized in India. For example, historians have argued that notions of purdah and more generalized cultural restrictions against women coming under the gaze and touch of male doctors during birth meant that, from the inception of the professionalization of obstetrics in India in the 19th-century colonial era, women were drawn into the profession in numbers that were unparalleled in the early history of obstetrics in Europe and the United States. Lal (1994), however, has suggested that this "cultural" explanation has been exaggerated to obscure the primary reason underlying the initial emphasis on the need for women doctors in India. She argues that the real motivation was to provide employment opportunities to white female medical doctors from Britain who could not compete in the male-dominated profession at home (Lal 1994).

Caste and notions of purity and pollution have also informed the biomedicalization of birth in India in a number of ways. Because birth has been considered a time of "pollution" that was usually handled in the past by hereditary midwives from low-caste communities, extra efforts and incentives were provided by colonial medical institutions to encourage higher-caste women to enter into the profession of obstetrics to give biomedicine greater respectability. Despite these efforts, caste concerns with birth pollution explain in part why a disproportionate number of Christians entered the profession initially.³ Caste also structured the organization of maternity patients in colonial hospitals, where separate wards were created for higher-caste women so that concerns about having to interact with lower-caste patients would not deter them from using the hospitals. In the late 1990s caste influenced the division of labor in hospital maternity wards, although in complicated ways. Because of Tamil Nadu's strong system of governmental

quotas, reserving positions for members of the lower caste communities to enter medical and nursing schools, these professions had begun to open up to a broader range of caste communities. The women who were employed as hospital ayahs and were responsible for removing the "polluting" elements of blood and feces and cleaning the new mothers were, however, all from low-caste communities. 4

One of the most significant factors influencing the nature of biomedicalized birth in the postcolonial era has been the international and national developmentalist agenda of population control. State and national family planning programs have tended to overshadow all other aspects of women's health. As I have argued elsewhere (Van Hollen 1998, 2002), during the time of my research, this had a profound, and sometimes profoundly negative, influence on women's interactions with maternal health care professionals during pregnancy and birth in government hospitals because public maternity wards serving poorer communities were a key arena within which the government was trying to implement its birth control campaigns. Many women complained that they faced intense pressure to undergo sterilization or accept IUDs immediately after birth (Van Hollen 1998,2002; see also Ram 2001b).

In short, biomedicalized birth in colonial and postcolonial India has developed in ways that reflect that country's unique social, cultural, and political history *at the same time* that biomedicalized birth was emerging in Europe and the United States in much different historical contexts. This simultaneity is important to keep in mind. As Chakrabarty has argued, when we examine these diverse modernities, it is critical that we do not revert to the "historicist" understanding of modernity as something emerging "first in Europe and then elsewhere" (2000:8). Such claims are themselves products of a Western discourse constructed to legitimize colonialism as a civilizing mission to bring modernity to the non-Western world. Nevertheless, the different contexts giving rise to different kinds of "modern birth" are, of course, related through ongoing, uneven relations of power. The claims about the nature of each form of birth are therefore made within a politicized context of dialogue. We will see below how this played itself out in discourses on the medicalization of childbirth pain in Tamil Nadu.

The Ethnographic Setting

This article derives from a research project that focuses on poor urban and semirural women's experiences of childbirth in Tamil Nadu in the late 20th century. 5 My findings are based on ethnographic research carried out for the full year of 1995, one month in 1993, and one month in 1997. The multisite ethnographic research focused primarily on Nochikuppam in Chennai and on the semirural town of Kaanathur-Reddikuppam south of Chennai. Members of both communities were engaged primarily in fishing or in agricultural or industrial wage labor.

I also traveled briefly to six other towns throughout Tamil Nadu and worked in several other low-income communities in Chennai, conducting the same kind of research to confirm that my findings, although unique in some respects, were not anomalies in the Tamil Nadu cultural landscape. I collected data through structured and unstructured interviews with over 70 pregnant and postpartum women and their families, in their homes and in public maternity wards. I asked women to describe the social, cultural, and physical events of their pregnancies, deliveries, and postpartum periods, to comment on how they made decisions regarding where to go and whom to consult for maternal-child health care, and to reflect on the nature of care given in diverse settings. I also interviewed a range of medical practitioners, including doctors, nurses, hospital ayahs. Multi-Purpose Health Workers (MPHWs), and midwives.6 I observed interactions between the various workers and women who were their patients in hospitals and homes. Although I was able to observe women birthing in urban hospitals, I did not have the opportunity to observe women birthing at home largely because I was living in Chennai and there did not happen to be any home deliveries during my visits to Kaanathur-Reddikuppam. Finally, I interviewed government and nongovernmental administrators working on women's health policy issues at the state and national levels.

For most residents of Nochikuppam, life centered on fishing. Fishing set a daily routine and created a daily state of economic unpredictability. As in most parts of the world, fishing in Tamil Nadu is a highly gendered occupation; only men go out to sea and women are largely responsible for selling the fish. Sometimes a fisherman might earn as much as 2,000 rupees (Rs) in one day; at other times he might go for weeks with no income at all. On average, the fishermen of Nochikuppam earned Rs500 per month (approximately US\$14), for an annual income of approximately Rs6,000 (\$167). Most residents of Nochikuppam belonged to the Hindu Pattinavar caste, a relatively low-caste community, but higher than other so-called untouchable, Scheduled Caste communities .7

Kaanathur-Reddikuppam comprised two main communities adjacent to one another but separated by a main road. Kaanathur was made up primarily of Scheduled Caste Hindus and some Christians, many of whom worked as agricultural laborers in the fields away from the coast or as wage laborers on construction projects. Agricultural laborers here earned approximately Rs4,000 per year (\$111) and other wage laborers earned approximately Rs3,000 per year (\$83).8 Generally, men earned more than women engaged in the same kind of work. For example,

female agricultural laborers sometimes earned Rs 15 per day, whereas male agricultural laborers often earned Rs30 or more per day.⁹ Reddikuppam, located closer to the beach, was primarily a Hindu Pattinavar fishing community. As with their counterparts in Nochikuppam, the average income of these fishermen was approximately Rs6,000 per year (\$167) but varied greatly depending on equipment used and the vagaries of nature.

Before marriage many women in Nochilcuppam and Kaanathur-Reddikuppam actively engaged in work that brought in cash, such as fish sales or agricultural labor. They often stopped working after marriage and during their reproductive years, resuming work once their last child was weaned. During their reproductive years, women continued to do unpaid work, for example, cleaning fish and prawns and repairing nets, in addition to their heavy workload looking after the household. Because of economic circumstances, some had no choice but to continue to sell fish in the markets or work in the fields during their reproductive years.

All women were expected to marry and to give birth to their first child within one year of the marriage. It was their role as mothers, particularly mothers of sons, that gave them the most status within their families. Motherhood and reproduction thus served as the primary cultural definitions of womanhood. A woman's first pregnancy and birth were highly celebrated events, marking a rite of passage to full acknowledgment as a woman.¹⁰ Becoming a mother was also viewed in the Tamil Hindu context as an act of sacrifice and suffering, and, as we shall see below, this suffering itself was tied to cultural notions of Female power.

The state of Tamil Nadu is and has been considered by the Indian government and by international development organizations such as UNICEF, the World Bank, and the World Health Organization one of India's model states with respect to the provision and use of biomedical maternal-child health care (MCH). In fact, as I have discussed elsewhere,¹¹ Madras played a prominent role in the professionalization of obstetrics in British India, at a time when the provision of biomedical obstetrical care was viewed as a central legitimating part of the "civilizing mission" of colonialism as well as a means to increase the population to ensure a steady pool of labor for colonial economic interests. Among many other things, the first maternity hospital in British India-and in Asia as a whole-was established in Madras in 1844. In 1936, when the first All India Obstetrics and Gynecological Congress gathered in Madras, the Chair, Dr. A. Lakshmanaswami Mudaliar, proudly stated

Madras may not stand comparison in many respects with the Gateway of India or with the City of Palaces - the second largest city in the British Empire. But Madras is proud and justly so, of the place it occupies in the Obstetric world of today and it is in no spirit of narrow provincialism that I venture to maintain that no other city in India could have claimed this honour with greater confidence and dignity. [All India Obstetric and Gynaecological Conference 1936:13]

By 1994 a Government of Tamil Nadu report showed that 60.6 percent of all reported deliveries in the state were institutionalized; the remainder took place in homes (Government of Tamil Nadu 1994a:36). A separate 1993 Government of Tamil Nadu report stated that hospital deliveries accounted for "more than 90%" of all deliveries in urban areas and "about 50%" of all deliveries in rural areas (Government of Tamil Nadu 1993). In 1993 the World Bank reported that in the capital city of Madras 99 percent of all deliveries were in hospitals (*The Hindu* 1993). And, by the beginning of 1995, the director of the World Bank-funded IPP-V project for Madras reported that 99.9 percent of all deliveries in Madras occurred in hospitals.¹² Because a number of home deliveries go unreported, these figures reflect a higher percentage of hospital deliveries than is actually the case. Nevertheless they demonstrate that the rates of hospital deliveries in Tamil Nadu are significantly greater than those for India as a whole, for which it was reported in 1995 that no more than 20 percent of all deliveries took place in hospitals (Jejeebhoy and Rao 1995:125). During the time of my research none of the women living in Nochikkupam gave birth at home.¹³ The majority of the women from Nochikkupam delivered their babies either in the large "government hospitals" in Chennai or in the smaller "corporation hospitals" that were also run by the government.

One of the legacies of colonialism has been the extremely uneven provision of biomedical maternal-child health services in urban and rural areas. This has persisted in the postcolonial era as reflected by the differences in statistics for urban versus rural hospital births in Tamil Nadu mentioned above. Kaanathur-Reddikuppam was a semirural town going through an economic transition related to its location along a road linking Chennai to the pilgrimage and tourist destination of Mamallapuram.¹⁴ The portion of the road connecting Kaanathur-Reddikuppam to Chennai was completed in the late 1960s, and the final section extending all the way to Mamallapuram was finished in 1982. Construction of this road led to a transition in birth experiences. Whereas only one generation prior to my research, most women gave birth at home, during the time of my research approximately half of the pregnant women from Kaanathur-Reddikuppam had their deliveries in public hospitals (most of these in Chennai) and the other half remained home. Of those who stayed home, some were assisted by a hereditary midwife, but increasing numbers of

home births were assisted by a woman with MPH training who had recently established residence in the town and was practicing privately.

In the remainder of the article I attempt to unravel the key social and cultural factors influencing the ways in which pain has become biomedicalized in Tamil Nadu, such that women were actively seeking drugs to increase labor pains but rejected the use of anesthesia.

Vali and the Body

Vali is a Tamil word meaning "pain" or "ache" and is frequently used to describe all sorts of generic aches and pains in the body. Labor pains are called *piracava vali* (birth/delivery pains) or *iduppu vali* (hip/waist pains). *Piracava vali* and *iduppu vali* refer to both the sensory experience of pain and to the contractions with which it is associated. In Tamil, no distinction is made between these two aspects of *piracava vali*. From the perspective of most of the women I met, the two were inseparable. That is why they found my question about reducing the pain so incomprehensible. To them, it was as though I was asking whether they were given any medicines to stop the contractions.

My question was not merely confusing but somewhat ominous, for it conjured up the specter of prolonged labor and the very tangible associated dangers to both mother and baby. Many elderly women I met had lost babies in childbirth and knew women who had died in childbirth when no emergency care was available. In many parts of India, including Tamil Nadu, the spirits of women and babies who die during childbirth are said to haunt people in the form of malignant spirits (*bhutpret*).¹⁵ This underscores the extent to which people fear such deaths. Despite the fishing critique of the overuse of cesareans in urban hospitals in Tamil Nadu, most women I met expressed great relief that such emergency procedures were increasingly available to them in case of problems such as delayed labor.

The rates of maternal and infant mortality have come down significantly in Tamil Nadu in the last two to three decades and are generally much lower than the national rates. In 1970 the infant mortality rate (IMR) for India as a whole was 129/1,000 and for Tamil Nadu it was 125. By 1991 the national IMR was down to 80, and the Tamil Nadu IMR was 57; by 1993 the IMR for Tamil Nadu was down to 56.¹⁶ Maternal mortality rates (MMR) in Tamil Nadu have also been steadily declining. In 1982 the MMR for Tamil Nadu was just over 250/100,000 live births, and by 1991 it was down to 130/100,000 (Government of Tamil Nadu 1993, 1994a). The national MMR in 1995 was reported to be 500/100,000 live births (Ravindran 1995:176). According to a 1990 UNICEF report, approximately 20 percent of *all* maternal mortalities worldwide occurred in India—the highest number for any one country (UNICEF 1990:6).¹⁷ Despite the fact that infant and maternal mortality rates for Tamil Nadu generally compare favorably to national rates, they are still high when compared with rates of highly industrialized countries and even when compared with the neighboring country of Sri Lanka, or the neighboring Indian state of Kerala. ¹⁸ In Tamil Nadu between 1988 and 1992 one in every 15 children died within the first year of life, and one in every 12 died before the age of five (Parsai 1995). Furthermore, recent studies have begun to point out that if we are to truly understand the risk associated with pregnancy and childbirth in India, particularly among poor communities, we must look more closely at the issue of morbidity rather than focus only on rates of mortality (Ravindran 1995; Srinivasa et al. 1997). A study carried out by Srinivasa et al. in the South Arcot District of Tamil Nadu and in Pondicherry reports that the "ratio of morbidity to mortality was higher than expected. For every maternal death there were 478 morbidities. There were 328 serious life-threatening morbidities per maternal death" (1997:iii).

The high risk associated with childbirth in the not-so-distant past, and continued risks at the time of this research, meant that for many, childbirth, including prolonged labor, continued to be perceived as dangerous for both mother and child. This was not a problem of the medical establishment pathologizing childbirth, as some critics of biomedicine suggest. Rather it reflected a very real close association between birth and death. Durga, a health worker with an unusual combination of biting wit and compassion, once spun a wonderful pun, saying, "Don't you see, 'Madam'? The word *piracava* (delivery) itself contains both birth (*pirra*) and death (*cavu*)."¹⁹

Vali and Power

In addition to "pain" and "ache," the word *vali* means "strength," "force," or "power." It was partly because of the combination of the pain and danger that Tamil women must endure during childbirth that they are often constructed as valiant beings who have great *sakti*. For Hindus, *sakti* is understood to be female regenerative power. *Sakti* is also viewed as a goddess. In fact, all Hindu goddesses may be called *Sakti*. *Sakti* is the activating principle of life, the principle of endless change that is both celebrated and feared (Trawick 1992; Wadley, ed. 1980). Wadley explains that the goddess *Sakti* "provides a motivating force for the inactive male: without the *sakti* of his goddess,

no male god can act" (1980:ix-x). This explains the often-quoted Tamil proverb, "Siva without Sakti is a corpse." Although men and women both have sakti, the men and women I met all agreed that women have more sakti than men. They said that women derive their sakti through the patience and perseverance (*porumai*) required to withstand the strains of childbirth and the sacrifices of motherhood.

Motherhood is highly valued in Tamil society (and throughout India), and infertility is highly stigmatized. Motherhood is also associated with suffering and sacrifice. But it is through this sacrifice that women gain power. Indeed, much has been written about the glorification of the suffering mother in Tamil and Indian nationalist discourses of the motherland and the mother tongue (e.g., see Bagchi 1990; Chatterjee 1990; Lakshmi 1990; Ramaswamy 1997). For women who do not have a great deal of economic or political clout within their families and communities, motherhood is the primary mode through which they have access to some form of power. Because most of the women I met did not work outside the home during their reproductive years, motherhood was indeed the main route to status. And because sakti was associated with a woman's ability to suffer nobly the pain of birth, that pain was an important ingredient in women's self-conception of the powers of motherhood. Many women told me that it was because of their sakti that they could withstand the intensified pain of oxytocin-induced labor. Their ability to withstand this increased pain was a sign that they indeed had sakti. Furthermore, some women went so far as to say that the oxytocin-induced pain *increased* their sakti. Induction was therefore represented in a highly positive light in terms of its contribution to cultural constructions of women's power.

A key concept that arose in my discussions with women about the relationship between suffering and sakti in the context of labor pains was that of *tapas*. *Tapas* is the bodily experience of internal heat from self-inflicted suffering as well as the power derived from that heat. This power can sometimes be visionary and bring the sufferer into contact with a divine world. Some women I met had achieved such visionary experiences through the pain of childbirth; a few connected their visionary experiences directly to the use of oxytocin drugs. Because *tapas* results from something people *do* to themselves, women who induce labor by taking the drugs were likely to view the induced pain as a kind of *tapas*. Kavita had just delivered her first baby four days before I met her and was very eager to tell me of her visionary experience, which she connected to the pain induced by taking oxytocin.

Shortly after her marriage, Kavita had discovered that she had a myoma (a tumor consisting of muscle tissue), and had had a myomectomy. There was some risk that, as a result of the operation, she would not be able to conceive, and in fact she did not conceive for some time. This caused a great deal of tension between her and her husband's families. Her in-laws suggested a divorce, and her own parents felt that if her in-laws were going to cause her so much grief, she should come back to live with them even though Kavita and her husband had been living on their own. Kavita's parents took her back with them to their house, whereupon her husband secured a legal order saying that she should stay with him, and so she returned to his house. Eventually, she was able to conceive.

While she was in labor on the delivery table, she envisioned a powerful woman who was crying. The woman was crying to tell people to reduce the number of children they had and thereby prevent much suffering. Along with this crying woman, Kavita saw a globe that was closed on the bottom and in the process of closing on the top. The crying woman showed her that the globe was divided into horizontal layers. The bottom, closed portion of the globe represented the first generation of women who had given birth to 16-17 children. These women had had to suffer through hardships equal to 100 years. The next higher layer represented the second generation of women, who had had five to ten children and 50 years' worth of suffering. The next higher layer represented the present, in which women were having two to five children and suffering for 25 years. Above that layer was one representing the future, in which women would have only one child and suffer ten years. Finally, at the vertex of the globe, which continued to close as the crying woman spoke, sat God. When there are no children, God will be there to help us, she explained. And when we reach the point where the globe closes, we will know that all is one.

Kavita told me that with each dose of oxytocin she received, her pain intensified, and each time this happened, the crying woman elaborated on a different layer of the globe. As her contractions accelerated, the globe closed faster and faster.

This was an extraordinary vision, driven as much by her own familial demands that she become a mother as by the demands of the nation's pervasive family- planning propaganda aimed at controlling women's reproduction and limiting the number of children they bear.²⁰ Familial conflicts and national propaganda here coalesced in a message that their reproductive capacities are ultimately a source of suffering for women. The vision, however, seemed to make mockery of both family and state by claiming that only a woman with no children can join God and avoid suffering. In this sense, the vision and Kavita's eagerness to relate it to me represent a fairly radical rejection of the cultural value placed on the suffering of mothers and a critique of the assumption that the basis of women's power and knowledge lies in their reproductive capabilities. And yet it was because of the suffering she endured during labor, which was augmented by shots of oxytocin, that she was able to have such a vision and to have this brush with God, something she had never experienced prior to giving birth. And it was *this* point that Kavita wanted

to emphasize to me. She and several other women I met felt that the intensity of induced labor and the tapas accrued added to their *sakti* and, in Kavita's case, brought her closer to God.

To say that women in Tamil Nadu were often discursively constructed as valiant and powerful is not to say that they were always given the respect that such qualities might demand. In fact, these constructions can serve to perpetuate women's subordination. Women themselves were keenly aware of this. Nevertheless, they felt as though their ability to withstand the pain of birth warranted special respect. Muttamma, a health worker from Reddikuppam, laughed nervously when I told her that my husband had been present at my first delivery, and she was shocked to hear that this was even going on in some of the private hospitals in Chennai. In Tamil Nadu men were not permitted to be present either during home births or during births in public hospitals. In fact, birth was considered to be so much the exclusive domain of women that husbands were sometimes not informed that their wives were in labor and only came to know after the baby had been born. After her initial surprise, however, Muttamma reconsidered and said, "Yes, that would be a good thing here, too. Only then would men give us some respect when they see how strong we must be."

Vali and Discourses of Modernity

Although women were constructed as having inner strength derived from their ability to withstand the pain of childbirth, I also encountered discourses about variation *among* women and across time both in terms of thresholds for tolerating pain and in terms of women's need for various drugs to alter the nature of labor pains. These were fundamentally discourses about modernity. I frequently heard women comment that "in those days" women's bodies were stronger and healthier than they are today. "In those days" women labored more in the fields right up until the day they delivered, whereas today women do not necessarily engage in such labor-intensive outdoor work, and even if they do, they stop working during their pregnancy, believing that it is their prerogative to sit in front of the television and get fat and have each and every wish fulfilled. "In those days" women were healthier because they ate food that was not tainted by pesticides. One result of the degrading effects of modernity on women's bodies, these arguments go, is that women's threshold for tolerating the pain of childbirth has diminished.

Similar discourses were constructed in Europe and the United States during the Victorian era, equating increased sensitivity to pain with the "civilized races" and indifference to pain with "primitives" and criminals (Horn 1994; Russett 1989). As discussed above, at the Turn of the Century, upper-class U.S. women used these theories to advocate in favor of the use of anesthesia during delivery. In contrast, the Indian women I met explained that, because of the effects of modernity, they could no longer withstand the pain over the long *duree* of labor, and so they wanted to be induced to get the pain over with as quickly as possible. Others said that it was not simply that women's tolerance of pain had diminished, but that their *bodies* had changed such that they were no longer having strong contractions, and therefore it had become increasingly *necessary* to induce labor. Fraser (1995) has noted a similar kind of discourse in an African American community in the southern United States about the ways in which modernity has transformed bodies of mothers and infants, thereby requiring new forms of maternal and child medical care. Although there is no denying that cultural practices can and do transform bodies, in these cases, such explanations appear to help people make sense of practices often structured in part by political-economic constraints that they may not control, as will be discussed below.

Those women who *were* aware of the use of analgesics to reduce labor pain often explained such use in terms of class, saying that middle- and upper-class women who led a more languid lifestyle could no longer tolerate the pain of birth at *all* and now required anesthesia. They argued that this was the reason analgesics are much more frequently used in private hospitals than in government hospitals. I conducted very cursory research in Apollo Hospital, one of Chennai's most prestigious private hospitals, meeting with patients and medical staff there. I also met with a doctor at the E. V. Kalyani Nursing Home, a private maternity hospital that has long been a favorite of the elite's. Indeed, in these private hospitals anesthesia, including epidurals, were provided, and some women did avail themselves of these drugs. Further research, however, should be done to determine how frequently women attending private hospitals get epidurals or other analgesics and how they feel about using such drugs. Based on the few discussions I had with patients at Apollo Hospital, it seemed to me that not very many women opted for epidurals despite the fact that they were available. Women who went to Apollo Hospital were encouraged by staff to attend prenatal birthing classes at the hospital, and those who attended the classes emphasized the importance of using breathing techniques to manage the pain of birth. In some sense, it seems that women viewed attending the classes and using "natural childbirth" breathing techniques as signs of modernity, because such classes were not provided in public hospitals.

Although the discourse among the poor in Tamil Nadu regarding pain medications was tinged with a certain amount of jealousy toward the leisure class, it was fundamentally a critique of modernity. This discourse was also, I

contend, a critique of "Westernized" modernity as perceived by lower-class women, who viewed upper-class, urban women as symbolizing such modernity or at least as emulating it. Although we do not want to fall into a "historicist" narrative about "Western" versus "non-Western" modernity, it is nevertheless important to see how discourses of modernity are framed in reference to one another. As Ram has written, "an internal tension that seems common to many postcolonial projects of modernization and subject formation" is that 'along with the "lack of faith in 'tradition' goes a fear of becoming over-modernized. Here the Western subject stands as a constant reminder of the hazards of an overly modernized population" (Ram 1998:124). Furthermore, one of the problems with constructing oppositional categories of "modernity" versus "tradition" in the first place is, as Jolly notes, that in postcolonial locations "the organic and the traditional are unduly linked with the indigenous while the technocratic and the modern are intimately entangled with the foreign" (2002:27). Yet, although these discourses among women in Tamil Nadu reflected a kind of class critique and a critique of "Western" modernity, their implication was that because of modernity women of *all* socioeconomic classes were no longer had as much *sakti* as they once did. As such discourses begin to circulate widely, they tend to underestimate the real dangers that overwork in "modern times" often poses to the health of both mother and child during pregnancy, delivery, and the postpartum period (see, e.g., Das Gupta and Chen 1995; Jejeebhoy and Rao 1995:140-145).

Kasayams

Another reason women in Tamil Nadu so readily accept medicines to induce labor is the widespread tradition of making herbal medicines at home that serve the same purpose. In Tamil the generic word for such an herbal concoction is *kasayam*. There are numerous *kasayams* made to induce labor but, as far as I could tell, no *kasayams* to reduce the pain of labor.

Starting at the beginning of the last month of pregnancy, some women I met took a mild, diluted *kasayam* every night just before going to sleep. Most people made this by boiling ground dried ginger and jaggery in water and drinking the mixture while it was warm.² Such mild *kasayams* were said to enable the pregnant woman to pass urine easily and frequently and were thought to help bring on labor pains gradually. More commonly, a woman used *kasayams* once she had the first inkling that her real labor pains had begun. *Kasayams* taken during labor generally include the same ingredients as those taken over the long term, although they are more concentrated and are expected to have immediate, dramatic results. ²² A woman took such a strong *kasayam* as a kind of litmus test to determine whether or not the pains she was experiencing were genuine labor pains. If the pains increased in frequency and intensity soon after she consumed the *kasayam*, it was a sure bet that they were real labor pains, and the *kasayam* was credited with speeding them up. If, however, the pains subsided, they were said to have been caused by "heat" (*soda vali*), and the *kasayam* was thought to have been effective in diminishing the "heat pains." In general, when people complained of having "heat pains" they were referring to indigestion caused by gas.

Women did not regard *kasayams* and other homemade concoctions to speed up labor as substitutes for stronger biomedical medicines such as oxytocin drugs, because weaker bodies now required stronger medicines. Most women I met were given both. The *kasayam* served to confirm that labor had begun in earnest, and the oxytocin drugs ensured that it would be over quickly. The widespread use of *kasayams* and other homemade medicines to induce labor seems to have made the ground fertile for the widespread acceptance of biomedical drugs to induce labor. It would be interesting to further explore the chemical properties of these homemade remedies and to consider the potential chemical interactions that could result from combining them with drugs such as epidocin and sintocin, which are increasingly administered during birth.

Biomedicine has not attained the level of hegemony in Tamil Nadu that it has in the United States, and its value is continuously debated. But it seems to be debated in partial and uneven ways. For example, many women I met embraced the authority of biomedical knowledge when it came to using drugs to induce labor (and in this case they actually shaped the nature of biomedicine). On the other hand, they also strongly valued nonbiomedical notions of health and diet for mother and baby during the postpartum period and resisted attempts by biomedical practitioners to persuade them to give up their dietary practices (Van Hollen 2002, 2003). Kalpana Ram's (1998) research on childbirth in the southern regions of Tamil Nadu suggests that women there were more evenly critical of biomedicalized birth than the women in my study. Ram argues that most women prefer to give birth at home with a midwife, partly because they want to avoid the condescending attitude of the hospital staff. Women are also critical of the medical staff's impatience regarding pain, as reflected in rising rates of cesareans and episiotomies, which goes against the Tamil value of women enduring pain (Ram 1998). In short, the women in her study in no way appear to value biomedicalized birth, and their critique is primarily based on the fact that biomedicalized birth has denied them their "religiously informed experiences of femininity" (Ram 1998:136). My study suggests a messier and more uneven representation of biomedicalized birth on the part of lower-class women in Chennai and Kaanthur-

Reddikuppam. In my experience, the critiques of biomedical knowledge and practice did not spring only from a concern with cultural constructions of femininity. Furthermore, even when religious notions of femininity informed this discourse, they did so in very complicated ways, given women's common belief that biomedical technologies to induce labor either enhanced sakti or helped revitalize it.

Institutional Constraints

The heavy use of biomedical drugs to induce labor and the infrequent use of anesthesia in public maternity wards cannot be wholly attributed to cultural constructions of womanhood or the use of kasayams. There were also very clear political-economic issues that constrained the practices within Tamil Nadu's maternity wards. These economic constraints were due not only to the relative poverty of India as a Third World nation but also to structures of patriarchy and class within the nation-state and within the state of Tamil Nadu that influenced the distribution of monies for poor women's reproductive health services. The per capita expenditure for health in India in 1988 was Rs57, compared with Rs142 for education and Rs153 for defense (Mukhopadhyay 1992:84). Per capita expenditure on health in Tamil Nadu during the same time was slightly higher than for India as a whole. During the mid-1980s, however, per capita expenditure in family welfare, which encompasses maternal and child health care services, was lower in Tamil Nadu at Rs5.23 than the all-India rate of Rs7.19 (Government of Tamil Nadu 1990:20). These figures for the mid-to-late 1980s are reflective of the situation when I began conducting research in 1993.

The large government hospitals in urban centers and even many of the primary health centers in rural areas were often severely overcrowded. In 1993 there were, on average, 950 deliveries every month and sometimes as many as 50 deliveries a day in Chennai's Kasthurba Gandhi Hospital, one of the largest government maternity hospitals in Tamil Nadu.²³ The "normal" (i.e., vaginal) deliveries all took place in one room, and it was common to see four or five women there in the final stages of labor at the same time. The prenatal and postnatal wards in the government hospitals consisted of huge open halls in which rows upon rows of women lay right next to one another enduring the pain of early labor or recovering from delivery and breastfeeding their newborns. Often there were not enough cots in the pre- and postnatal wards for all of the women, and some were required to lie on a thin mat on the floor.

In this context, drugs to induce labor can be seen as a form of crowd control. Oakley (1984), Martin (1987), and others have pointed to the use of drugs in post-Industrial Revolution obstetrics to induce labor thought by medical staff to be "inefficient" in relation to an abstract, scientifically derived "normal" length of labor. In the overcrowded, large hospitals in Tamil Nadu, however, the concern for efficiency did not seem so abstract but may, at times, have been dictated by the need to keep women moving from the prenatal ward to the delivery ward to the postnatal ward and out in order to free up space for the steady influx of new women in labor.

Political-economic constraints also contributed to the fact that analgesics were not given to women in these hospitals. In some instances, if the medical staff were unable to sufficiently calm a woman who was anxious because of the pain she was experiencing, they gave her Valium (diazepam, locally referred to as "Calmpose"). A tranquilizer given to relax a woman and induce sleep, it can also slow down contractions, so doctors were reluctant to administer it. The rationale behind administering Valium was to calm an unruly woman rather than to alleviate her pain. Doctors working in maternity wards were not trained to administer analgesics other than local anesthesia used for such things as episiotomies.²⁴ To administer more powerful analgesics, it was necessary for staff to call in the help of a specially trained anesthesiologist. Many of the smaller public maternity wards in Tamil Nadu did not have anesthesiologists in house. In the larger government hospitals that did have an anesthesiologist, that doctor was often so overextended that he could only attend to emergencies, such as cesareans, and not to cases that primarily involved the patient's comfort. (Although the majority of the obstetricians working in hospitals in Tamil Nadu were women, the anesthesiologists were typically men.) The situation of public maternity hospitals operating under severe economic constraints is not unique to Tamil Nadu or to India (see, e.g., Sargent 1989 on Benin, and Lukere and Jolly, eds. 2002 on the Pacific region). In fact, the situation is far more extreme in some other places. In Jamaica, for example, 25 percent of all deliveries take place in the Victoria Jubilee Hospital. In 1987, due to budgetary shortages, 65 percent of the women delivering in that hospital were completely *unattended* by any kind of medical staff (Sargent and Rawlins 1992). This is clearly a *global* issue for poor women. As Jolly notes on the context of the Pacific region, "Poverty often ensures less intervention.... Thus, Tongan 'Western' medicine is not the same as 'Western' medicine in Australia or North America, both because it is underresourced and also because technocratic values are not hegemonic or so supported by advanced biomedical technologies" (2002:11). Another political-economic factor that requires further research concerns the role of pharmaceutical companies that market both analgesics and oxytocin drugs in India.

Invoking Vali at Home

In Kaanathur-Reddikuppam, it used to be that if a woman remained at home for her delivery, the local midwife (maruttuvacci) or female relatives could splash hot water on the woman's hips and give her homemade kasayams to try to speed up the labor. If the labor seemed to be protracted, they might pray to their *kula teyvam* (family goddess) or to Desamma to protect the mother and child during the delivery.²⁵ If the delivery still did not progress, they might summon for a woman known to be susceptible to possession by a goddess to communicate with the goddess and ascertain what the trouble was. In some instances, they might resort to the ritualized grinding or pounding of paddy, which is practiced in many parts of Tamil Nadu (see Radhika and Balasubramanian 1990: 11) 26 If, however, after a day or two the baby still had not come, the woman might be transported to Kasthurba Gandhi Hospital in Chennai for emergency care. Before the first road was built in the late 1960s the journey to from Kaanathur-Reddikuppam to Chennai was long and arduous, and the mother or baby sometimes died en route.

During the time of my research, approximately half of the pregnant women from Kaanathur-Reddikuppam chose to go to hospitals for their deliveries, and the other half remained home. Those who remained home still employed many of the techniques mentioned above to speed up labor. In addition, however, they increasingly induced labor either with B12 injections administered by the local pharmacist or with oxytocin injections or IV drips administered by Shahida, a Muslim MPHWH who had taken up a private practice overseeing deliveries in the area. Shahida had gone through an 18-month biomedical course to receive her certificate as an MPHWH. Six months of that training was devoted to maternal-child health care education. People in the community calculated that the fees charged by Shahida (Rs600) were only slightly higher than the cost of the combined bribes demanded in the government hospitals (approximately Rs500, and sometimes higher). For the most indigent, neither option was viable; they would call the local midwife, who charged significantly less. Several women, however, told me that the only reason they had decided to stay home for their deliveries rather than go to the hospital was that, given Shahida's presence, they could now have access to oxytocin drugs *and* the emotional support of their family. Most women complained that in the maternity wards of the large government hospitals they had very little emotional support. In those hospitals, women were required to labor alone, without family members. Furthermore, many reported being scolded and sometimes even physically beaten by members of the medical staff for calling out in pain during their deliveries.²⁷ Just as in the public hospitals, it was almost routine for Shahida to induce women by administering oxytocin drugs. This not only gave Shahida an air of professionalism, but it also served to fulfill a demand that so many women had come to view as a fundamental right. Resistance to hospitalized births in this community was not based on a critique of technologized birth (which is central to the home-birth movement in the United States) but, rather, a critique of the forms of discrimination they faced in the public hospitals.

The use of oxytocin injections for home deliveries is not unique to Tamil Nadu. Jeffery et al. (1988:111-112) reported that in 1982-83 over one-third of the women delivering in the Uttar Pradesh village of Dharmnagri received such injections from private male compounders (pharmacists). Jordan (1993) showed that Mayan midwives in Yucatan used B 12 injections to induce labor at home, and Sargent and Bascope (1997) revealed that Yucatecan midwives are increasingly administering oxytocin during home deliveries. There, too, the administration of such drugs is viewed as the only thing that gives the midwife specialized knowledge. And Sargent and Bascope (1997) note that local women and midwives share the notion that a speedy delivery is desirable to avoid the risks of prolonged labor. Shahida is, however, not a midwife, but an MPHWH with more generalized paramedical training. I never came across a midwife who was administering oxytocin by herself in home deliveries. Most women perceived this as the most important distinction between Shahida's services and those of the maruttuvaccis.

Although people who called Shahida for their deliveries expected to be surrounded by their relatives, as part of her professional persona Shahida often insisted that most family members be kept out of the room during the delivery. Yet, unlike in the hospitals, family members were right on the other side of the often thinly thatched wall or a sari that Shahida had set up as a curtain. Ultimately, she was on their turf and had to constantly negotiate between her role as a professional and her need to be accepted by the community, especially because she was from a different class and a Muslim working in a Hindu majority community. The following story of Kaveri's delivery exemplifies the ways in which Shahida was forced to accommodate the desires of a family during a long labor.

Kaveri was the eighth born of nine children in a Hindu family. She was married when she was about 16, and her first baby was born in 1995 when she was around 17, although she was not sure of her exact age. Her delivery took place in her mother-in-law's home. Kaveri began to feel labor pains around 3 p.m. So she walked down the road to inform Shahida, whom she referred to as "doctor." Kaveri's family had decided to call Shahida in part because they

knew she had "English" medicines. Shahida told Kaveri to go back home, take a hot bath, and wait for some time. Kaveri's mother-in-law made a dried ginger kasayam, which Kaveri drank.

When Kaveri's husband returned home from work at 8 p.m., he went to summon Shahida, who returned to the house with him. Shahida hung saris around the door and windows of the one-room thatched house and insisted on total privacy to conduct the delivery. She immediately gave Kaveri an enema and a shot of oxytocin and asked her to walk around the room. Kaveri's contractions became extremely painful, but she was not dilating significantly. Kaveri's mother and mother-in-law were waiting outside with several other female relatives. Shahida repeatedly administered shots of oxytocin, but still the baby would not come.

The next morning, just as the sun began to rise, Kaveri's cousin, who had converted to Christianity, grew concerned. She began yelling at Shahida from across the saris, telling her that she was incompetent and that she should let others in to help. Shahida yelled back, telling the cousin not to disturb her and that no one should come in because they might bring in germs (*kirumi*). The cousin poured some coconut oil into a cup, took it to the church next door, and asked the priest to bless it. She then hurried back to Kaveri and implored her to drink the oil. Shahida protested, saying this was all superstitious (*mudanampikkai*). And Kaveri herself refused, fearing that her cousin was practicing Christian magic (*mantiravatam*). But the cousin's resolve was firm, and the other relatives waiting outside felt it was worth a try, so Shahida and Kaveri were forced to comply. The cousin began to enter the house with the cup of coconut oil, but Shahida snapped at her and told her to stay outside. Shahida said that Kaveri would be ashamed and get the evil eye (*drishdi*) if anyone came in, and she pushed the cousin back out. The cousin handed the cup through the sari curtain and Kaveri drank the coconut oil.

By 8 a.m., however, despite the numerous shots of oxytocin and the blessed coconut oil, the baby still had not been born. Everyone was exasperated, and all of the relatives outside agreed to ask the goddess to prophesy what would happen. Kaveri's mother's younger sister was summoned because she was known to be subject to possession by the local kula teyvam, known as Tulukandamma. Tulukandamma "came on" the aunt, who began to dance just outside the house. The aunt held a brass plate with burning camphor in the palm of her hand and circled her head around and around as she danced. Speaking through the aunt, Tulukandamma prophesied that the baby would be born within three hours. Then, in order to cool down the goddess, the aunt ate a handful of *neem* leaves and returned to her normal state.

A baby boy was born one hour later. By that time, Shahida had administered 13 shots of oxytocin.

This story provides a clear example of the multiple techniques people in Kaanathur-Reddikuppam employed to attempt to speed up labor. It is particularly interesting insofar as it demonstrates the tensions that may arise between biomedical and nonbiomedical approaches to managing birth. The most dramatic moment was the point when Shahida told the cousin to remain on the other side of the curtain so as not to inflict the evil eye on Kaveri. This marked a distinct shift from her previous admonitions that people stay out so as to avoid the spread of germs. In the end, although Shahida was able to maintain some level of professional dominance by keeping others out of the house, she had to use nonbiomedical notions of the evil eye to legitimate this distance. Furthermore, she was forced to accept the cousin's demands that Kaveri consume the coconut oil. And, ultimately, there was an unspoken assumption among Kaveri's relatives that the presence of Tulukandamma was responsible for the successful birth of the baby rather than Shahida's drugs and professional knowledge. The credit given to Tulukandamma may have also served to establish an unspoken assertion of the supremacy of Hinduism within the community as a whole. This birth seemed to dramatize tensions among Hindu, Christian, and Muslim actors, as well as those between biomedical and nonbiomedical systems of knowledge. This was, however, never articulated to me as a religious issue, either because the question of religious conflict is so highly contentious or, to the contrary, because it in fact plays a much less significant role in Tamil Nadu than in other parts of India.

Serious consequences can result from use of biomedical drugs to induce labor in the absence of immediate access to emergency care, as is the case in Kaanathur-Reddikuppam. These include uterine rupture and decreased oxygen supply to the baby (Davis-Floyd 1992:96-97). Kitzinger explains that extremely powerful contractions, such as those induced by oxytocin drugs, "are likely to interfere with the blood flow through the uterus and so cause fetal distress" (1991:301). If the cervix is not "ripe" and ready for labor and oxytocin is administered, the uterus may not respond to the hormones, and it may then be necessary to proceed with a cesarean (Boston Women's Health Collective 1992:456; Kitzinger 1991:300). Furthermore, Kitzinger (1991:304) asserts that if labor is induced, it is critical to monitor contractions using an electrofetal monitor. Such technology was never used in home deliveries in Tamil Nadu. The acceptance and valorization of childbirth pain in Tamil Nadu is, of course, no more surprising than the endless search for the painless birth in the U.S. context. What is perhaps most disturbing in each case is the fact that women "opt" for medical interventions that may increase risks to their health and the health of their babies. Shahida's practice was not an anomaly. Along with the growth of the private health sector generally in India (Mukhopadhyay 1992:68-76), there was a growing trend in Tamil Nadu for women with MPH training to

establish private practices to oversee deliveries in rural and semirural areas. In some areas, such women provide an important service. Given the demands of women to be induced, however, stricter monitoring of such private care must be established to ensure that drugs like oxytocin are not abused.

There are, of course, costs associated with the trend toward privatization. Not all can afford to pay the fees for private in-home care. Increasing reliance on the private sector can lead to a decrease in the availability and quality of government subsidized health care. For the poorest families in Kaanathur-Reddikuppam, the cost of a delivery in the government hospitals in Chennai was already out of reach, given the combined cost of transportation and the endless bribes demanded by the hospital staff for virtually every service provided. The very poor, therefore, continued to use the services of the local maruttuvacci, who charged only Rs50 to deliver a girl or Rs100 for a boy but who had no biomedical training. The rise in the private sector could mean that less effort will be placed on redressing preexisting problems within the public sector.

Conclusion

In addition to the important issue of the potential health risks associated with the routinized use of labor-inducing drugs, we need also to consider the implications this has on constructions of gender, specifically of maternity. What is at stake for women's cultural identity when drugs are routinely used to induce labor? If women have previously been constructed as powerful because of the long, drawnout pain they experience in childbirth, what happens to that power when the pain is short-lived and no longer naturally produced? The women I met were increasingly dependent on medical technologies to deliver their babies; what is the social and cultural significance of this?

Illich argued that medicalization is a form of mystification that "expropriates the power of the individual to heal himself and to shape his or her environment" (1976:9). For women in Tamil Nadu, however, the process of mystification was by no means complete, as the story of Kaveri demonstrates. In fact, women were actively engaged in reconstructing their lives and bodies in response to the availability of new drugs. But the process of reconstruction was limited by the class and gender position of these women and the political-economic realities that dictated the nature of their care both at home and in public maternity wards. It is important to consider that the lack of anesthesiologists and epidurals to serve all of the women in public maternity wards and the possible, unstated, and perhaps unconscious use of oxytocin drugs as a form of crowd control could have contributed to women's perception that a painless birth would deny them their *sakti*. The cultural understanding of the relationship between childbirth pain and *sakti* and the politiceconomic limitations on maternal health care must be viewed as mutually reinforcing rather than viewing one as causing the other.

The critical question is not whether biomedicalization is controlling or liberating. It can be both. I certainly do not want to suggest that nonbiomedicalized births are "natural" and do not involve forms of control, as some romanticized depictions of "traditional" birth suggest.² Rather, as women make sense of this form of biomedicalization, they draw radically different conclusions about the relationship between modernity and *sakti*. Using the *same* technology—in this case, oxytocin drugs—some women view modernity as increasing and some view it as decreasing this female regenerative power. Some women felt that the intensification of pain caused by modern drugs *increased* their *sakti*, yet others argued that forces of modernity had *depleted* their *sakti* thereby requiring the use of these drugs. Modernity is thus simultaneously embraced and critiqued; it is viewed as both enabling and crippling.

What is significant here is not simply that local context influences the nature of biomedicalization, but that this specific process of biomedicalization has created the context for a new contentious discourse on *sakti* and a disputed reconceptualization of maternity. Ginsburg and Rapp (1995) suggest that we must begin to move beyond analyses that simply demonstrate the ways in which ideas and practices associated with modern reproduction reflect or support preexisting local social and cultural structures or combine to form new hybrids. Rather, they urge us to view reproduction itself as a critical site within which *new* cultural meanings can emerge. As they state, "regardless of its popular associations with notions of continuity, reproduction also provides a terrain for imagining new cultural futures and transformations" (Ginsburg and Rapp 1995:2). In this vein, we should consider how notions of maternity, and of gender more broadly, are *refashioned* through the biomedicalization of birth in Tamil Nadu. Through the routinized use of drugs to induce labor, a contradictory discourse on *sakti*, or female regenerative power, has emerged, creating a debate as to whether modernity has increased or depleted women's power and transforming cultural conceptions of maternity. The final question that requires further investigation is: How might this emergent discourse influence other arenas of social life outside the realm of reproductive health? That is, how might this process of biomedicalization transform constructions of maternity and of gender more generally?

NOTES

Acknowledgments. This material is part of a larger research project, which was funded by the U.S.-Fulbright-Hays Foundation and the Woodrow Wilson Dissertation Grant in Women's Studies. Special thanks are due to Annette Mathews, Haripriya Narasingham, Rajeswari Prabhakaran, and Kausalya Hart for their assistance with this research and translations. I am particularly grateful to all of the women and men who participated in this research and to the Working Women's Forum for their ongoing support of this project. Additional thanks go to Lawrence Cohen, Indrani Chal.terjee, and the anonymous *MAQ* reviewers for their insightful comments on earlier versions of this article. Correspondence may be addressed to the author at Department of Anthropology, University of Notre Dame, 61 1 Flanner Hall, Notre Dame, IN 46556-5611.

1. All names of informants in this article are pseudonyms unless otherwise indicated. I have tried to substitute names that are similar in kind to the real names (such as Sanskritic versus Tamil; Hindu versus Muslim versus Christian). Unless otherwise indicated, all quotes from my ethnographic interviews are translated from Tamil into English. English words used in Tamil conversations are indicated by quotation marks.
2. See, for example, Martin's (1987: ch. 8) discussion on the relationships among class, race, and cesarean sections in the United States.
3. The relationship between medical and missionary activity was another factor here.
4. Ayahs are women who work as the lowest-level medical staff in maternity wards. They prepare women for deliveries, assist doctors and nurses during deliveries, and clean and move mothers and babies following deliveries.
5. The full ethnographic account of this study can be found in Van Hollen 2003.
6. *Multi-Purpose Health Worker* (MPHW) is an official title given to people who work as outreach health workers attached to public hospitals. Male MPHWS undergo 12 months of medical training and are primarily responsible for public health programs for such things as tuberculosis, malaria, AIDS, and leprosy. Female MPHWS undergo 18 months of medical training and are primarily responsible for outreach programs for maternal-child health care and family planning.
7. *Scheduled Castes* is an official term used by the government of India to refer to "untouchable" castes. This term was established when the government developed a quota policy for the Scheduled Castes that reserves positions in local government, government employment, and state-run educational institutions. A policy establishing these reservations for the Scheduled Castes was incorporated into the Indian constitution at independence in 1947. Members of the Scheduled Castes are also referred to as *dalits* in the context of a political movement to abolish caste-based discrimination.
8. These figures are based on statistics provided by the Integrated Child Development Services' (ICDS) *balwadi* workers, who kept census-type records for the area.
9. This systematic wage differential for men and women was first established within the colonial capitalist economy. Kynch (1981:138) reports that in the wage economy of Madras Presidency in 1872-73 one man was systematically paid the equivalent of two women's wages, which was also the equivalent of four children's wages.
10. For a detailed discussion of these pregnancy rituals, see Van Hollen 2003: ch. 4.
11. See Van Hollen 2003: ch. 2.
12. Personal communication from Dr. S. S. Kodimani. Director, IPP-V for Madras Corporation, January 27, 1995.
13. There had, however, been one home birth just prior to my first visit there in 1993.
14. Previously called Mahabalipuram.
15. For more in-depth discussion, see Chawla 1994.
16. These are Sample Registration System (SRS) statistics taken from the *Statistical Handbook of Tamil Nadu 1994* (Government of Tamil Nadu 1994b). It is important to note that all IMR and MMR statistics are based on *registered* deaths and therefore are often lower than the actual rates. The neonatal mortality rate and the under-five-year mortality rate in Tamil Nadu (50.1 and 20.6) are considerably lower than the national rates (56.4 and 29.9), but neonatal mortality rates remain high in both cases. The perinatal mortality rate in Tamil Nadu (53.8) is noticeably higher than the national rate (47.2) (Government of Tamil Nadu 1994a). Most infant deaths in Tamil Nadu are due to low birth weight, and many are stillbirths. These statistics reflect the fact that immunization programs have been relatively successful. More attention, however, needs to be placed on improving maternal health, particularly during pregnancy, and improving care during delivery. Discrepancies between rural and urban maternal-child health care are also evident; the rural IMR in Tamil Nadu is 65, and the

urban IMR is 42 (Government of Tamil Nadu 1993:18). For more in-depth discussion on the causes and variations in infant mortality with particular reference to India, see Jain and Visaria 1988; Mahadevan et al. 1985; Sandhya 1991; and Gandotra and Das 1988.

17. Mari Bhat et al. (1995) have shown that maternal mortality rates are extremely difficult to determine in India given the absence of a reliable national vital registration system. Although they agree with Visaria (1971) that the national MMR has been declining since the early part of this century, they also contend that overall maternal mortality rates for the country and for individual states may be inflated because other causes of death have been attributed to childbirth. Other community-based studies, however, indicate that maternal mortality rates may be much higher than officially reported (Bhatia 1988).
18. Among industrialized countries, Sweden has consistently had the best record with respect to mortality rates. For example, as early as 1979, the IMR in Sweden was 7.5/1,000 live births, whereas in the United States it was 13.8 (Jordan 1993:47). And in 1983 the MMR in Sweden was 1/100,000 births, whereas for the United States it was 10/100,000 (Shiva 1992:273). The national data for Sri Lanka from 1991-93 reported an MMR of 40/100,000 live births and an IMR of 18.2/1,000 live births (World Health Organization 1996:3-4). (Note that statistics gathered in both India and Sri Lanka by WHO and UNICEF vary significantly from the nationally reported statistics.) In 1988 the IMR in Kerala was reported to be 28 while that of Tamil Nadu was 74 (UNICEF 1990:17).
19. Linguistically, there is in fact no connection between the word *cavu* (death) with a long "aa" and the word *piracava* (birth) with a short "a."
20. Elsewhere I have discussed the family planning incentives and their impact on women's experiences during birth in hospitals (Van Hollen 1998,2003).
21. Others make it out of single ingredients-dried ginger, jaggery, cumin, anise, black coriander seeds-and take one such kasayam each night.
22. In addition to the ingredients already mentioned, some people include pepper, drumstick leaves, coconut milk, *omam*, *cittirai*, or dried *cundakkay* in these kasayams.
23. Personal communication from the Superintendent of Kasthurba Gandhi Hospital, March 5, 1993.
24. An episiotomy is a surgical cut in the perineum, the area between the vagina and the anus, to enlarge the opening through which the baby will be born. In large government hospitals in Chennai, episiotomies were performed routinely, as is often the case in U.S. hospitals. Although women commented on the fact that the stitches from the episiotomies were painful, they did not tend to criticize this practice. Such critiques have been made, however, by medical anthropologists and others who argue that this procedure is often done for cultural rather than physiological reasons (see, e.g., Davis-Floyd 1992).
25. Desamma is an important goddess among the fishing communities in both Nochikuppam and Kaanathur-Reddikuppam. She is particularly associated with events connected to birth and the welfare of mother and child.
26. A trained midwife in a village outside of Kanchipuram described this ritual to me: At the time that they begin to feel the labor pains and they are shaking and throbbing in pain [*toodikirangal* we will do the ceremony of pounding and kicking the pounding stone [*ammikkal*]. We take a measuring vessel [*padi*] and fill it with paddy and put that in the middle of the room. Then we take the pounding stone and go around the paddy and kick the pounding stone as we go around. Next we take the pounding stone and make it stand up straight in the paddy. As we do this we say to the birthing woman, "Look, you will get the baby quickly today." We kick the stone over and over and pray to god. Many women come and do this. This is good luck for the women who do the ceremony. They will surely have a baby themselves if they do this ceremony for another woman. Sometimes the baby is born only because of this ceremony.
27. For further discussion of this form of "professional dominance" and differences between responses of obstetricians, nurses, and ayahs, see Van Hollen 2003. 28. For excellent critiques of romanticized notions of "traditional birth" see Lukere and Jolly 2002 and Rozario 1998.

REFERENCES CITED

- All India Obstetric and Gynaecological Congress
1936 Proceedings of the First All India Obstetric and Gynaecological Congress. Madras:
All India Obstetric and Gynaecological Congress.
- Apple, Rima D., ed.
1990 Women, Health, and Medicine in America: A Historical Handbook. New York:
Garland.
- Arnold, David
1993 Colonizing the Body: State Medicine and Epidemic Disease in 19th-Century India.
Berkeley: University of California Press.
- Bagchi, Jasodhara
1990 Representing Nationalism: Ideology of Motherhood in Colonial Bengal. *Economic
and Political Weekly* 25(42 and 43):WS65-WS7 1.
- Bala, Poonam
1991 Imperialism and Medicine in Bengal: A Socio-Historical Perspective. New Delhi:
Sage.
- Becker, Gay
2000 *The Elusive Embryo: How Women and Men Approach New Reproductive Technologies*.
Berkeley: University of California Press.
- Bhatia, J. C.
1988 A Study of Maternal Mortality in Anantapur District, Andhra Pradesh, India. Bangalore:
Indian Institute of Management.
- Boston Women's Health Collective
1992 *The New Our Bodies Ourselves*. New York: Simon and Schuster.
- Chakrabarty, Dipesh
2000 *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton:
Princeton University Press.
- Chatterjee, Partha
1990 The Nationalist Resolution of the Women's Question. *In Recasting Women: Essays
in Indian Colonial History*. Kumkum Sangari and Sudesh Vaid, eds. Pp. 233-253.
New Brunswick, NJ: Rutgers University Press.
- Chawla, Janet
1994 *Child-Bearing and Culture: Women Centered Revisioning of the Traditional Midwife:
The Dai as a Ritual Practitioner*. New Delhi: Indian Social Institute.
- Das Gupta, Monica, and Lincoln C. Chen
1995 Overview. *In Women's Health in India: Risk and Vulnerability*. Monica Das
Gupta, et al., eds. Pp. 1-16. Madras: Oxford University Press.
- Davis-Floyd, Robbie E.
1992 *Birth as an American Rite of Passage*. Berkeley: University of California Press.
Davis-Floyd, Robbie, and Carolyn F. Sargent, eds.
1997 *Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Berkeley:
University of California Press.
- Ehrenreich, Barbara, and Diedre English
1973 *Witches, Midwives and Nurses: A History of Women Healers*. Old Westbury,
NY: Feminist Press.
- Fielder, Deborah Cordero
1997 *Authoritative Knowledge and Birth Territories in Contemporary Japan*. *In Childbirth
and Authoritative Knowledge: Cross-Cultural Perspectives*. Robbie Davis-Floyd
Carolyn F. Sargent, eds. Pp. 159-179. Berkeley: University of California Press.
- Foucault, Michel
1973[t963] *The Birth of the Clinic: An Archeology of Medical Perception*. New York:
Pantheon Books.
- Fraser, Gertrude J.
1995 *Modern Bodies, Modern Minds: Midwifery and Reproductive Change in an African
American Community*. *In Conceiving the New World Order: The Global Politics
of Reproduction*. Faye D. Ginsburg and Rayna Rapp, eds. Pp. 42-58. Berkeley: University
of California Press.
- Gandotra, M. M., and Narayan Das
1988 *Infant Mortality and Its Causes*. Delhi: Hlimalaya Publishing House.
- Georges, Eugenia

1997 Fetal Ultrasound Imaging and the Production of Authoritative Knowledge in Greece. *In* *Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Robbie Davis-Floyd and Carolyn F. Sargent, eds. Pp.91-112. Berkeley: University of California Press.

Ginsburg, Faye D., and Rayna Rapp
 1995 Introduction: Conceiving the New World Order. *In* *Conceiving the New World Order: The Global Politics of Reproduction*. Faye D. Ginsburg and Rayna Rapp, eds. Pp. 1-17. Berkeley: University of California Press.

Ginsburg, Faye D., and Rayna Rapp, eds.
 1995 *Conceiving the New World Order: The Global Politics of Reproduction*. Berkeley: University of California Press.

Government of Tamil Nadu
 1990 *Children and Women in Tamilnadu: A Situation Analysis 1990*. Madras: Government of Tamil Nadu.

1993 *State Plan of Action for the Child in Tamil Nadu*. Madras: Government of Tamil Nadu.

1994a *Child Survival and Safe Motherhood in Tamil Nadu*. Madras: Directorate of Public Health and Preventative Medicine.

1994b *Statistical Handbook of Tamil Nadu*. Madras: Directorate of Public Health and Preventative Medicine.

The Hindu
 1993 *India and the World Bank*. Hindu, February 23.

Horn, David G.
 1994 *Social Bodies: Science, Reproduction, and Italian Modernity*. Princeton: Princeton University Press.

Illich, Ivan
 1976 *Medical Nemesis: The Expropriation of Health*. New York: Pantheon Books.

Jain, Anrudh K., and Pravin Visaria, eds.
 1988 *Infant Mortality in India: Differentials and Determinants*. New Delhi: Sage.

Jeffery, Roger
 1988 *The Politics of Health in India*. Berkeley: University of California Press.

Jeffery, Patricia, Roger Jeffery, and Andrew Lyon
 1988 *Labour Pains and Labour Power: Women and Childbearing in India*. Atlantic Highlands, NJ: Zed Books.

Jejeebhoy, Shireen J., and Saumya Rama Rao
 1995 *Unsafe Motherhood: A Review of Reproductive Health*. *In* *Women's Health in India: Risk and Vulnerability*. Monica Das Gupta, et al., eds. Pp. 122-152. Madras: Oxford University Press.

Jolly, Margaret
 2002 Introduction. *Birthing beyond the Confines of Tradition and Modernity? In Birthing in the Pacific: Beyond Tradition and Modernity?* Vicki Lukere and Margaret Jolly, eds. Pp. 1-32. Honolulu: University of Hawai'i Press.

Jordan, Brigitte
 1978 *Birth in Four Cultures: A Crosscultural Investigation of Childbirth in Yucatan, Holland, Sweden, and the United States*. 1st edition. Prospect Heights, IL: Waveland Press.

1993 *Birth in Four Cultures: A Crosscultural Investigation of Childbirth in Yucatan, Holland, Sweden, and the United States*. 4th edition. Prospect Heights, IL: Waveland Press.

Kitzinger, Sheila
 1991[1980] *The Complete Book of Pregnancy and Childbirth*. New York: Alfred A. Knopf.

Kynch, Jocelyn
 1987 *Some State Responses to Male and Female Need in British India*. *In* *Women, State, and Ideology: Studies from Africa and Asia*. Haleh Afshar, ed. Pp. 130-151. Albany: State University of New York Press.

Lakshmi, C. S.
 1990 *Mother, Mother-Community and Mother-Politics in Tamil Nadu*. *Economic and Political Weekly* 25(42 and 43): WS72-WS83.

Lal, Maneesha
 1994 *The Politics of Gender and Medicine in Colonial India: The Countess of Dufferin's Fund, 1885-1888*. *Bulletin of the History of Medicine* 68(1):29-66.

Leavitt, Judith W.
 1986 *Brought to Bed: Child-Bearing in America, 1750-1950*. New York: Oxford University Press.

Lock, Margaret, and Patricia Kaufert
 1998 Introduction. *In Pragmatic Women and Body Politics*. Margaret Lock and Patricia Kaufert, eds. Pp. 1-27. Cambridge: Cambridge University Press.

Lukere, Vicki, and Margaret Jolly, eds.
 2002 *Birthing in the Pacific: Beyond Tradition and Modernity?* Honolulu: University of Hawai'i Press.

Mahadevan, K. M. S. R. Murthy, P. R. Reddy, P. J. Reddy, V. Gowri, and S. Sivaraju
 1985 *Infant and Childhood Mortality in India: Bio-Social Determinants*. Delhi: Mittal Publications.

Mari Bhat, P. N., K. Navaneethan, and S. Irudaya Rajan
 1995 Maternal Mortality: Estimates from an Econometric Model. *In Women's Health in India: Risk and Vulnerability*. Monica Das Gupta, et al., eds. Pp. 97-121. Madras: Oxford University Press.

Martin, Emily
 1987 *The Woman in the Body: A Cultural Analysis of Reproduction*. Boston: Beacon Press.

Miller, L. G.
 1979 Pain, Parturition, and the Profession: Twilight Sleep in America. *In Health Care in America: Essays in Social History*. S. Reverby and D. Rosner, eds. Pp. 19-37. Philadelphia: Temple University Press.

Mukhopadhyay, Alok
 1992 Health Systems and Services. *In State of India's Health*. Mukhopadhyay, Alok, ed. Pp. 53-85. New Delhi: Voluntary Health Association of India (VHAI).

Oakley, Ann
 1984 *The Captured Womb: A History of the Medical Care of Pregnant Women*. New York: Basil Blackwell.

Ortiz, Anna
 1997 "Bare-Handed" Medicine and Its Elusive Patients: The Unstable Construction of Pregnant Women and Fetuses in Dominican Obstetrics Discourse. *Feminist Studies* 23(2):263-288.

Osherson, Samuel, and Lorna Amarasingham
 1981 The Machine Metaphor in Medicine. *In Social Contexts of Health, Illness and Patient Care*. Elliot Mishler, ed. Pp. 218-249. Cambridge: Cambridge University Press.

Parsai, Gaigi
 1995 Tamil Nadu Family Planning Drive "A Success." *Hindu*, May 4.

Pear, Robert
 1999 Mothers on Medicaid Overcharged for Plain Relief. *New York Times*, March 8.

Pigg, Stacy Leigh
 1997 Authority in Translation: Finding, Knowing, Naming, and Training "Traditional Birth Attendants" in Nepal. *In Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Robbie Davis-Floyd and Carolyn F. Sargent, eds. Pp. 233-262. Berkeley: University of California Press.

Radhika, Vaidya M., and A. V. Balasubramanian
 1990 Mother and Child Care in Traditional Medicine, Part 2. Madras: LSPSS Monograph No. 4.

Ram, Kalpana
 1994 Medical Management and Giving Birth: Responses of Coastal Women in Tamil Nadu. *In Reproductive Health Matters* 4:20-26.
 1998 Maternity and the Story of Enlightenment in the Colonies: Tamil Coastal Women, South India. *In Maternities and Modernities: Colonial and Postcolonial Experiences in Asia and the Pacific*. Kalpana Ram and Margaret Jolly, eds. Pp. 114-143. Cambridge: University of Cambridge Press.
 2001 a Implicit and Discursive Knowledge: Fieldwork among Midwives in South India. Lecture presented in the Department of Anthropology lecture series on Anthropology Engages Ethics, University of Notre Dame, April 23.
 2001b Rationalizing Fecund Bodies: Family Planning Policy and the Modern Indian Nation-State. *In Borders of Being: Citizenship, Fertility, and Sexuality in Asia and the Pacific*. Margaret Jolly and Kalpana Ram, eds. Pp. 82-117. Ann Arbor: University of Michigan Press.

- Ram, Kalpana, and Margaret Jolly, eds.
1998 *Maternities and Modernities: Colonial and Postcolonial Experiences in Asia and the Pacific*. Cambridge: University of Cambridge Press.
- Ramaswamy, Sumati
1997 *Passions of the Tongue: Language Devotion in Tamil India, 1891-1970*. Berkeley: University of California Press.
- Ramusack, Barbara
1996 *Motherhood and Medical Intervention: Women's Bodies and Professionalism in India After World War I*. Paper presented for panel on "The Modernization of Health Care in India: Women as Practitioners and Patients" at the 25th Annual Conference on South Asia, Madison, Wisconsin, October 18-20.
1997 *Issues of Equity: Maternal Medical Facilities in Rural Mysore, 1880-1920*. Paper presented for panel on "Maternal Birth Experiences: Historical and Anthropological Perspectives" at the 26th Annual Conference on South Asia, Madison, Wisconsin, October 18.
- Rapp, Rayna
1991 *Moral Pioneers: Women, Men, and Fetuses on a Frontier of Reproductive Technology*. In *Gender at the Crossroads of Knowledge: Feminist Anthropology in the Postmodern Era*. Micaela di Leonardo, ed. Pp. 383-395. Berkeley: University of California Press.
2000 *Testing Women, Testing the Fetus: The Social Impact of Amniocentesis in America*. New York: Routledge.
- Ravindran, T. K. Sundari
1995 *Women's Health in a Rural Poor Population in Tamil Nadu*. In *Women's Health in India: Risk and Vulnerability*. Monica Das (Gupta, et al., eds. Pp. 175-211. Madras: Oxford University Press.
- Reissman, Catherine K.
1983 *Women and Medicalization: A New Perspective*. *Social Policy* 14(1):3-18.
- Rozario, Santi
1998 *The Dai and the Doctor: Discourses on Women's Reproductive Health in Rural Bangladesh*. In *Maternities and Modernities: Colonial and Postcolonial Experiences in Asia and the Pacific*. Kalpana Ram and Margaret Jolly, eds. Pp. 144-176. Cambridge: Cambridge University Press.
- Russett, Cynthia Eagle
1989 *Sexual Science: The Victorian Construction of Womanhood*. Cambridge: Harvard University Press.
- Sandhya, S.
1991 *Socio-Economic and Cultural Correlates of Infant Mortality: A Demographic Appraisal*. New Delhi: Concept Publishing.
- Sargent, Carolyn F.
1982 *The Cultural Context of Therapeutic Choice: Obstetrical Care Decisions among the Bariba of Benin*. Boston: D. Reidel.
1989 *Maternity, Medicine, and Power: Reproductive Decisions in Urban Benin*. Berkeley: University of California Press.
- Sargent, Carolyn, and Grace Bascope
1997 *Ways of Knowing about Birth in Three Cultures*. In *Childbirth and Authoritative Knowledge: Cross-Cultural Perspectives*. Robbie Davis-Floyd and Carolyn F. Sargent, eds. Pp. 183-208. Berkeley: University of California Press.
- Sargent, Carolyn, and Joan Rawlins
1992 *Transformations in Maternity Services in Jamaica*. *Social Science and Medicine* 35:1225-1232.
- Shiva, Mira
1992 *Women and Health*. In *State of India's Health*. Alok Mukhopadhyay, ed. Pp. 265-301. New Delhi: Voluntary Health Association of India (VHAI).
- Smith-Rosenberg, Caroll
1985 *Disorderly Conduct: Visions of Gender in Victorian America*. New York: Oxford University Press.
- Srinivasa, D. K., K. A. Narayan, Asha Oumachigui, and Gutam Roy
1997 *Prevalence of Maternal Morbidity in a South Indian Community*. P. iii. Pondicherry, India: Jawaharlal Institute of Postgraduate Medical Education and Research.
- Trawick, Margaret
1992 *Death and Nurturance in Indian Systems of Healing*. In *Paths to Asian Medical*

Knowledge. Charles Leslie and Allan Young, eds. Pp. 129-159. Berkeley: University of California Press.

UNICEF

1990 Children and Women in India: A Situation Analysis. New Delhi: UNICEF.

Van Hollen, Cecilia

1998 Moving Targets: Routine IUD Insertion in Maternity Wards in Tamil Nadu, India. *Reproductive Health Matters* 6(11):98-106.

2002 "Baby Friendly" Hospitals and Bad Mothers: Maneuvering Development in the Postpartum Period in Tamil Nadu, South India. In *Daughters of Hariti: Birth and Female Healers in South and Southeast Asia*. Santi Rozario and Geoffrey Samuel, eds. Pp. 163-181. New York: Routledge Press.

2003 *Birth on the Threshold: Childbirth and Modernity in South India*. Berkeley: University of California Press.

Visaria, P.

1971 *The Sex Ratio of the Population of India*. Monograph no. 10, Census of India, 1961, vol. 1. New Delhi: Manager of Publications.

Wadley, Susan

1980 Paradoxical Powers of Tamil Women. *In The Powers of Tamil Women*. Susan Wadley, ed. Pp. 153-170. Syracuse: Foreign and Comparative Studies Program, Syracuse University.

Wadley, Susan, ed.

1980 *The Powers of Tamil Women*. Syracuse: Foreign and Comparative Studies Program, Syracuse University.

World Health Organization (WHO)

1996 *WHO South-East Asia Region: Regional Health Report*. New Delhi: WHO.