Of Midwifery, Cords and the Afterbirth:

Contrasting Conceptions of the Body and Reproductive Health

Dissertation submitted in the partial fulfillment of the requirements for the award of the degree of

MASTER OF PHILOSOPHY

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DECLARATION

I declare that the dissertation entitled **"Of Midwifery, Cords and the Afterbirth: Contrasting Conceptions of the Body and Reproductive Health"** submitted by me for the award of the degree of **Master of Philosophy** of Jawaharlal Nehru University is my own work. The dissertation has not been submitted for any other degree of this or any other university.

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CERTIFICATE

We recommend that this dissertation be placed before the examiners for evaluation.

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Contents

INTRODUCTION

"Taking a position with the victims of modern science outside the perimeters of the 'civilized' world, I shall offset myth against science and history. These victims, for good or for ill, tend to speak the language of myths; their rulers and their self-declared emancipators both speak the language of science and history."

- Ashis Nandy, *Alternative Sciences*, 1980

Systems of health care exist as a cultural universal, write Loustaunau and Sobo (1997). Scholars have argued that "the ways in which we perceive and interpret health and illness, and seek and deliver care, are inextricably bound up with cultural norms, beliefs, and values, as well as with social structure and environmental conditions" (Loustaunau and Sobo 1997: 1). Thus, medicine opens up a new window through which human social behaviour can be understood. The sociology and anthropology of medicine, as branches of the parent disciplines emerged out of an interest for studying not only the culture in which a particular kind of medical system prevails but also the cultural practices that go within a system of medicine and what that culture can tell us about the larger ideals and values of society.

With the secularization of the West, the dependence on rationality and individualism during the post-Enlightenment period, the increase in average life expectancies and lowering of death rate, "the turn to biomedicine and science as the ultimate weapon against the threat of illness, disease and premature death have generated ideas and practices which tend to deny the fragility and mortality of the human body" (Lupton 2003: 1). In western societies, serious illness and death are today constructed as "strange, mysterious, frightening and unexpected events" (*Ibid.*). As Lupton argues, medicine, or the faith in medicine, comes with a set of expectations regarding health and the body. The expectations of feeling well, of children surviving birth and infancy, of all surgery being successful and so on, are resultants of the faith that is invested in modern medicine. This is one of the chief reasons behind its operation as a hegemonic system of knowledge with regard to notions of health. However, this system is not always accepted uncritically. Apart from not being as successful as it claims, at being the panacea for all health related ills, the practice of modern medicine has also been critiqued for the modes and mechanisms it employs while providing health care to individuals.

One of the most strident critiques extended to the practice of science and medicine has come from feminist scholars, who have alleged among other things, that the reliance on technology has left women with a disadvantage. Scholars such Carolyn Merchant, Sandra Harding and Evelyn Fox Keller to name a few, have provided detailed accounts of how the project of science and technology is not gender 'neutral' and that in practice it is covertly, and at times even overtly, discriminating. The feminist critique of science, technology and medicine has had a substantial influence on my research. The other school of thought that has also shaped this dissertation to a considerable extent has been writings of scholars belonging to the school of critical studies in India. The works of authors such as Ashis Nandy, J.P.S. Uberoi, Shiv Viswanathan and others, writing on practice of alternative sciences, have been a major force directing my research. I have tried to collate the nuanced assertions made by these two academic schools in order to apply it to the site on birthing, where a large part of their arguments can be seen to unfold. The works of these scholars have been seminal for the framing of my intellectual trajectory regards this dissertation.

The primary concern of this dissertation is to look at one very important stage within the protracted process of birthing, namely the severing of umbilical cord and the birth of the placenta. This stage cumulatively referred to as the third stage of labour, which begins after the child is delivered and ends with the expulsion of the placenta, has been at the helm of pregnancy related medical debate in recent times. The 'active' management of the third stage of labour has been propagated universally by the discipline in the light of postpartum haemorrhage which is identified as one of the main causes for high maternal mortality rates. This third stage of labour is believed to reduce the chances of postpartum haemorrhage in women. In 'active management' the woman is administered oxytocin to induce labour after the child is delivered and cord tractions are applied in order to bring out the placenta. In some cases when the oxytocin and the cord tractions do not have the desired results of dispelling the placenta, medical attendants need to insert their hand into the womb of the woman and manually remove it from inside her. This method is followed by practitioners rigorously in the 'developing' countries where maternal death

rates are still very high 'Active management' forms an elaborate section in the manuals of the World Health Organization of maternal and infant health in these regions

A direct consequence of the practice of 'active management' of the third stage is that the umbilical cord of the infant is clamped immediately on birth. The discovery of new pathological conditions in infants which have been related to early cord clamping has provided impetus to the ongoing debate on the third stage of labour. Diseases such as infant anaemia, respiratory problems, and autism on some occasions, have been linked to early cord clamping. The problem is even more acute in the 'developing' nations and as a result has been the topic of much discussion. The situation gets further complicated with the phenomenon of cord blood banking that has been picking up momentum in the obstetrical world, both in the West and non-West. It has been alleged by the medical community that by having access to a ready store of cord blood, diseases that individuals develop over the course of their lives, even terminal illnesses like cancer, can be treated with far more accuracy and better results. In order to arrive at a situation where cord blood can be readily accessed, the practice of early cord clamping needs to be encouraged. The maximum amount of blood must be stored when the cord is clamped early while it still retains most of the blood. Early cord clamping is the standard practice in obstetric wards today despite of the presence of ample evidence relating the harmful effects of this practice.

An analysis of the practices of cord clamping and delivery of the placenta within the biomedical discipline of obstetrics goes a long way in producing a narrative of not just the discursive elements in the sphere of obstetrics and medicine, but it also has the potential of reflecting on larger themes and ideas governing the lives of people in 'modern' society. The very politics that direct the social lives of individuals is what drives the discipline of medicine which tends to feign ignorance of these influences. The biases and prejudices based on gender, caste and class positions that work in society, are at play even within the realm of medical practice. The hierarchies which operate in the social order are replicated in similar form in the discipline of medicine. Hence, the *medical* becomes nothing but another means of 'ordering' the social. This is not only the

case with modern medicine, as will be demonstrated towards the latter half of this dissertation. Traditional systems of knowledge have always functioned within the intricacies of a complex social reality. These systems incorporated the beliefs, customs, habits and religious practices of members of the community, which can be seen as a major cause for its peripheral status in present times. The superiority of modern science is premised on its apparent segregation from these aspects of social life, which allows it to become the single most hegemonic form of knowledge. While the 'neutrality' of the project of modern science has always been brandished, the efficacy of the therapeutic practices of traditional forms of medicine has always been underplayed. This dissertation, alongside addressing issues central to medical epistemology, will also concomitantly analyze the different forms of marginalization that have taken place approximately over the last two centuries.

With the cutting of the umbilical cord, the baby and the mother are physically separated from each other for the first time. This is of great biological and social significance. In this dissertation, I will bring out the ways in which this particular stage in childbirth is conceptualized in two different paradigms, namely, the modern discipline of obstetrics and traditional Indian systems of therapeutics. The social and medical construction of the phenomenon of cord cutting and delivery of the placenta is considerably different in these divergent systems of thought. Although the umbilical cord *is* eventually cut and the placenta *is* finally delivered in both systems, the processes of going about it and the framing of this stage within the site of birthing are markedly dissimilar in the these systems of knowledge. Hence, the analysis of this particular moment in the larger process of birthing can only be grasped in its entirety if it is observed within the context in which it unfurls.

The first two chapters explore the contours of the modern discipline of obstetrics and the practices of cord cutting and delivery of the placenta that go on within it. Before going into the heart of the matter, I trace the history of medicalization of the birthing process that has taken place in the West and in its colonies. The historical sequence of events that followed in the colonies was similar to what occurred in the epicentre. The policies that

had been introduced in the home countries were being introduced in the colonies as well, without taking into account the differences of geographical and social contexts. The progression towards medicalization entailed a reformulation of the basic assumptions regarding childbirth. The principle of pathology formed the basis for this new mode of perception. Pregnancy and childbirth came to be seen as a highly pathological phenomenon, fraught with many fears. The first chapter of this dissertation therefore, concentrates on marking out the progression of events in the discourse on pregnancy and how it came to be constructed as a pathologized condition by 'modern' medical practice. The first part of the chapter deals with changes that came about in the West while the second half deals with the repercussions of the policies implemented by the imperial states in its colonies.

With the emergence of population as a political and economic problem, as pointed out by Foucault (1973), the survival and preservation of the human race came to occupy a central position in the discourses of the nineteenth century, a time when society itself was undergoing a process of reconceptualization. Western society was war afflicted, and in need of 'healthy' men to serve the country. As a result, issues pertaining to pregnancy, childbirth and 'motherhood' were intrinsically wrapped up with the larger debate on health of future soldiers of the country. With respect to the colonies, labour constituted another important element of the discourse on health and childbirth. It was recognized that the health of the colonial population was not up to the general standards that would be conducive for high levels of productivity, the sole motivating factor behind the mission of colonization. Therefore, the kind of policies and changes that were brought about in Western society were being transposed onto the colonial setting, bringing about momentous changes with regard to childbirth practices and other related dimensions of life. From hereon the reproductive lives and practices of subjects, both national and colonial, were put under surveillance by means of the discipline of obstetrics which was in charge of regulating the behavior of women who were about to give birth.

Having discussed the process of medicalization and the ideological motivation behind the setting up of the new profession of obstetrics, it becomes important to look at the means

by which obstetricians and 'medical men' were able to completely take over the arena of birth. The most important mechanism through which the supremacy of obstetricians was established and maintained was the use of technology and invention of new surgical instruments. Once the male professionals had usurped the field of birthing from the hands of female midwives, which has been documented in the first section of the second chapter, it was only a matter of time before the midwives were vanquished from the scene. The ousting of the midwife was quickly followed by the proliferation of technology in the field of obstetrics. The second chapter thus accounts for the culmination of the historical processes, referred to in the previous chapter, in the growing field of New Reproductive Technologies (NRT). The level of medical intervention in childbirth came to be directly proportional to the quantity and quality of technical resources available to the medical practitioner. The more invasive the technology or a particular procedure, the greater was its supposed efficiency within such a set up. One can look at the medical practices related to birthing through an analogy of the performance of rituals. It then becomes important to locate the actual process of umbilical cord cutting and the delivery of the placenta within this frame of reference, as an extension of the technological rituals that take place in the obstetric ward of the hospital. The last section of the second chapter is devoted towards this end, where I take up an analysis of how this phase of childbirth is dealt with in both theory and practice.

Having discussed modern obstetrics at great length, chapter three presents the counter to such a discourse on pregnancy. Here, I look at the social, cultural and medical construction of birth which provides a dramatic contrast to the way in which it is conceptualized in the earlier sections of this dissertation. Here too, one cannot merely study the process of cord cutting and birth of the placenta to gain insight into the subject, but one has to locate it within the larger construction of birthing itself. Only then can one capture the kind of meaning it holds in these societies where there still exists some form of 'traditional' knowledge system. This chapter is further divided into three segments. The first attempts to provide a general overview of the way in which the phenomenon of childbirth is set up in large parts of India. This alternative conceptualization forms the basis for the numerous 'alternative' practices that are carried out in childbirth. In the

second segment I look at the socio-medical construction of cord cutting and the birth of the placenta. As mentioned in myriad ways throughout this body of work, in 'indigenous' systems of thought, the medical and the social are collapsed into one another, and one cannot treat them separately for research purposes. They are both equally important and essential to the larger processes of social organization of life within the community. Observing one without the other would render an incomplete understanding of the phenomenon itself.

Since this is the case, it would be unwise to overlook some of the problematic elements that constitute an integral part of the system. It articulates the rigid caste and gender hierarchies that are seen to plague Indian society that become even more heightened at times of birth and death. Both these events in the natural life course of individuals are seen to inflict high levels of ritual impurity amongst the family members and relatives. In the overall 'polluting' event of birth, the act of cord cutting and the handling of the afterbirth is considered to be the most polluting, thereby making it an area which is officiated exclusively by low caste women in most regions in India. The third section of this chapter is therefore, concerned with producing a reading of reality which does not render these lower caste women agency-less in the modern discourse on 'emancipation' but portrays them as active negotiators of their caste, class and gender positions by the very virtue of the kind of work that they do. The Indian 'midwife' has been referred to by scholars as the "high priestess" of birth, being the only one with the privilege of presiding over all the rituals related to birthing. The realm of the ritual where participation primarily is restricted to upper caste male members is reversed at the site of birth. Hence, this site is potent with the kind of implications it has for caste and gender studies, apart from it being the ground for the display of an extremely vibrant therapeutic system.

In this work of research, I consciously set up these two systems of thought as distinct from each other in ways that almost make them seem incommensurable. Whether or not they are truly incommensurable in reality is something I am ambivalent about. But for the purpose of making the kind of arguments that I wish to, I have taken the liberty to construct them as such. Many of the demons of the biomedical system are 'real' while

others maybe open to interpretation, yet such an overarching demonization becomes necessary in order to make an argument in favour of another system which threatens the hegemony of this one. It is especially necessary since every effort is made, epistemologically, economically, politically and socially to devalue its worth and wipe out its last existing traces. Certain strands of exploitation are common to both and certain practices in both paradigms need to be qualified. However, the larger motivation for my research is to make an argument for guaranteeing a certain space within the 'mainstream' for 'alternative' medical practices, knowing fully well that bringing them into the 'mainstream' might mean making them vulnerable to the same cooptive forces leading to similar or newer kinds of exploitative practices. I am making an argument in favour of more 'choice' for the woman, not just from within a single framework of knowledge and its related practices, but from within a diverse array of medical traditions. This too shall not be as 'free' a 'choice' that the slogan "freedom of choice" assures, but it still holds the promise of being something more than what it is today.

Chapter One

Disciplining the Womb:
Obstetrics and the History of Medicalization of Birth

The history of the changing conceptions of prenatal or antenatal care in Britain and other countries of the West becomes an important starting point for looking at the process of medicalization of pregnancy and childbirth, not merely in the West but in most places across the world. According to Nandy, the "first criterion of a global civilization is that all other surviving civilizations define themselves with reference to it" (Nandy 2007: 173). Although the categories of 'historical' and 'ahistorical' societies might not have completely disappeared, he puts forward the notion that through a process of rewriting and "over-correction", the 'ahistorical' is being consumed in to the "historical mode". He argues that societies in a globalized era have a sense of their own past and present, but their understanding of the 'future' is based on someone else's 'present'. In the light of the above argument, along with the specificity of approximately two hundred years of colonial domination, it might prove useful to analyze the various developments taking place in the late eighteenth and nineteenth century Europe and America, before we take up any dedicated study of childbirth within the Indian context.

Through an unraveling of the various ideas and debates revolving around the issue of pregnancy in the initial years of bringing childbirth within the folds of mainstream medicine, one can see the forging of alliances between the State, the Church, the *expert* and the market. It was because of a consolidated effort on the part of all these agents that the medium through which childbirth was articulated in society began to undergo changes. These changes need to be seen not only as a resultant of the immediate impetus received from events occurring on the national and international political front, but also emerging in the wake of a restructuring of the discipline of medicine itself. The history of pregnancy care and the history of the medical profession, as we have come to know it

today, in many ways followed similar trajectories. Hence, it becomes imperative to contextualize the changing perceptions regarding pregnancy and childbirth within the ambit of the changing "medical gaze". The first section of this chapter is aimed toward this very end.

I

From the late eighteenth century fundamental epistemological shifts began to occur within the science of medicine. Over the course of the transition, of going from a discipline that perceived diseases to be in their purest form only in the nosological table (Classificatory medicine) to becoming a clinical science, medicine underwent a host of structural and perceptual modifications. The history of medicine, as traced back by Foucault, reveals a structural transformation in the relationship between the *visible* and the *invisible* which in turn gave rise to a new medical language that now facilitated the correspondence between '*what is seen*' and '*what is said*' (Foucault 1973: xii). A verbalization of the relationship between the *visible* and *invisible*, according to Foucault, becomes a fundamental prerequisite for the setting up of any concrete body of knowledge.

As the "medicine of classes" began to give way to a "medicine of epidemics", where the disease was now seen to be located in the human body instead of the abstract world of the closed nosological table, the means by which the social space was organized and perceived also began to undergo modifications. The emergence of the notion of 'epidemic' led to a deeper involvement of the State, in the arena of medicine. The State was called in to play with respect to two crucial requirements for the restructuring of the discipline. As the conception of 'epidemics' simultaneously gave rise to a new discourse around the issue of 'public health', the State became a key figure in ensuring the health of its citizens. Hence, all 'public health' measures needed to be undertaken by the State. Towards this end, the State not only provided funding and formulated public policies, but also set up mechanisms to maintain surveillance over the social sphere. It was in this

respect that "medical space" came to not only "coincide with social space" but completely pervaded and penetrated it (*Ibid.:*31). According to Foucault, it was almost as though the medical profession had directly inherited the two "most visible missions" of the Church, namely "the consolation of souls" and "the alleviation of pain" (*Ibid.:*32). The aim ("the alleviation of physical misery" of its citizens) of this alliance between the State and the medical profession was being expressed through a religious vocabulary.

Once the medical profession assumed some of the formidable responsibilities of the Church, the medical discourse could no longer be restricted to merely the 'pathological'. Till the end of the eighteenth century, 'health' was considered to occupy the place at the polar end of what was known as the 'pathological'. But by the nineteenth century, ideas of 'health' had been replaced by a preoccupation with a much broader notion of 'normality' or 'normalcy' (*Ibid.:* 35), which had implications not only for the manner in which medicine would be conceived of or practiced and taught in the future but also completed the process of justification for the constant inspection of all aspects of social life. The hospital, by this time gets converted in to a space where patients are treated for their illness and also a means by which the non-affected populace is protected from those who are seen as the carriers of the 'contagion'. This redefined space therefore, begins to encapsulate two of the most fundamental principles on which the medical knowledge can further perpetuate itself, namely, the means for the "training" of new doctors and the "distribution" of diseases (*Ibid.:* 42).

As Foucault noted, "for clinical experience to become a possible form of knowledge, a reorganization of the hospital field, a new definition of the status of the patient in society, and the establishment of a certain relationship between public assistance and medical experience, between help and knowledge, became necessary; the patient has to be enveloped in a collective, homogenous space" (*Ibid.:*195). The reconstitution of the language of medicine was an equally important development that led to the eventual restructuring of the discipline. In this newly reorganized body of knowledge, there was a constant "visibility of death" that was "endlessly repeated" and yet was "exorcised",

thereby reminding one of the limits of human life and yet at the same time exhibiting the technical ammunitions with which it is warded off (*Ibid.:* 198).

Once Foucault establishes for us the manner in which modern medicine, in the process of reworking itself, gradually seizes control of the entire social space, an analysis of the process of medicalization of childbirth becomes a logical extension of the same line of argument. The tactical maneuvers through which "a particular area of social behaviour (pregnancy) comes to be separated off from social behaviour in general and reconstituted as a specialist, technical subject under the external jurisdiction of some external authority" (Oakley 1984: 1) becomes easier to decipher in the light of the above arguments. Oakley, in her work on the history of antenatal care very cogently carves out the historical route that was taken in order to reach the current state of affairs with relation to modern day obstetrics, which envisages the "probability of pathology" in every stage of childbearing. By looking at the developments in this field over the last 80 years, she puts forward the argument that the co-opting of pregnancy in to the scope of the medical profession has provided a relatively simple way to facilitate social control over women. The process of this conversion took place in phases. The first phase saw the conversion of the social phenomena of pregnancy in to a biological one, while the biological finally got converted in to a highly technical and medical phenomenon by the mid twentieth century. This coincides with the gradual movement from childbirth being a 'natural' state to it finally being identified as pathologized condition.

Childbirth, in the eighteenth and nineteenth century was conceived in a way that was very different from what it has come to mean today. Pregnancy, childbirth and childrearing were seen as different stages within one continuous entity. This conceptualization of looking at it as a continuous phenomenon, where one stage leads in to the other, has given way to a more fractured scheme of understanding. With the medicalization of antenatal care that provided momentum to numerous new technical advancements in this area, there has been a movement towards the medicalization of the total process of childbirth, including active medical/technical intervention even at the time of delivery. All the material that circulated in society on pregnancy up until the 1900 was mainly

literature that advised women on various issues pertaining to the life-style of pregnant women, although there were some therapies in practice like that of bloodletting. There was no real differentiation between medical/obstetrical texts and 'advice' literature (*Ibid.:*14). Medical intervention was minimal on various accounts. First, scientific inventions and discoveries relating to pregnancy were at a nascent stage, a far cry from the kind of technologized birthing that we see today. There was an absence of a consolidated, systematic, universal body of knowledge and even the detection of pregnancy was practiced differently in different parts of the West. Hence, medical intervention in matters concerning childbearing was to a large extent reliant on the woman's own perception and opinion on whether or not she was pregnant. Second, not many women had the luxury of access to antenatal care (even in its initial forms) at that point in time. It was something that could be afforded by only a select few belonging to the elite sections of society. Add to this the notion of 'shame' and the woman's honour, which was considered to be at stake during any physical medical examination that was required while providing antenatal care[1].

However, it was not as though there was a complete absence of any sort of medical assistance for pregnant women. While women from wealthy classes had the option of hiring an accoucheur or midwife for the job, women from the poorer sections could make use of Dispensaries or Lying-in Hospitals (*Ibid.:* 28-29). Lying-in Hospitals[2] set the foundations for some of the principles that were to become crucial in the pathologization of childbirth. It curbed competition posed by female midwives, established the control of

[1] Abdominal examinations were considered highly improper and even when it was conducted the pregnant woman would have her bedclothes on while the examiners gaze would be fixed on the ceiling. Vaginal examinations were rare, although upper-class women who sought pre-delivery care were administered this sort of an examination if required under heavy sedation. It was considered 'improper' to examine a woman's genitals and cervix if she was not made unconscious first (Oakley 1984: p 19-21).

[2] Lying-in Hospitals started out as charitable institutions in the eighteenth century in Britain, where a pregnant woman would not only have to have a letter of recommendation from a hospital subscriber and "a residence in the right parish", but would also have to prove her poverty while at the same time prove the onset of labour (Oakley 1984: 29). Some of these hospitals only admitted married women who were required to produce proof of marriage at the time of entry. There were also a few Lying-in Hospitals for the first pregnancies of unmarried women so as not to encourage a vice, namely pregnancies out of wedlock. While the first Lying-in Hospital of Britain was founded in the year 1747 (*Ibid*), the colonial government in India set one up in the Madras in 1844 (Hodges 2006: 4). The history of the West and the history of the non-West are intricately sutured together with the thread of 'colonization', a theme that will be dealt with towards the latter half of this chapter.

the doctor over the patient's preferences and enabled clinical expertise to be taught to medical students. A more elaborate discussion on the last two points will appear over the course of this chapter, while the first point will be talked about at great length in the third chapter. There were some scanty options for seeking antenatal care in the eighteenth and nineteenth century in the West but it was still in the process of becoming the 'norm'[3]. This continued to be the state of affairs till the beginning of the twentieth century.

The twentieth century was ushered in with a strapping discourse on population that had been implicit in the framing of social, political and economic life for at least the last hundred years, as revealed through Foucault's work on sexuality. The underlying rationale behind the exertion of social control over women through the mechanism of medicine in general and obstetrics in particular then begins to direct us towards another kind of history, which at first glance does not come across as self-evident. The history of sexuality in society from the eighteenth century onwards becomes inextricably linked to the history of social control of women and both these histories are direct fallouts of a much larger public discourse that demanded the regulation of sex in very different ways from what had operated before. Therefore, prior to looking at twentieth century developments in Britain around the notion of 'population' and its repercussions for women, it might be valuable to map out how the concept of 'population' not only entered in to public discourse but also came to occupy prime location in social, political and economic realms.

Foucault's analysis makes evident that the repression of sex, post-seventeenth century was of a peculiar nature. Up until this time the codes regulating sexual behaviour in

[3] 'Norms' came to constitute a crucial part of all the discourses going on in society from the nineteenth century onwards. With the change in the nature of power in that period, regulative and corrective mechanisms in society continued to exert control over its subjects by setting up a discourse around the theme of 'norms' in order to regulate the population's sexual behaviour. Foucault writes, "a normalizing society is the historical outcome of a technology of powered centred on life" (Foucault 1978: 144). The ripple effect of this is carried on to discipline of medicine, one of the key allies in exercising this control, which was also undergoing a restructuring of sorts at that point. As mentioned earlier the category of 'health' was replaced by the category of 'normality' or 'normalcy', which brings out the simultaneity in the incorporation of the discourse on 'norms' into the different realms of social and public life. Hence, society was caught in the midst of a major restructuring that was affecting diverse aspects of the lives of the people. Every new development on one level was tied to developments taking places on multiple other levels.

society was much more lax, but thereafter society underwent a significant transformation giving rise to a more stringent set of rules to police this aspect of life. Even though sexual repression was at its peak during this time, there was endless speech related to it. It was like a "secret" that needed to be revealed through speech (Foucault 1978). This was the paradox that became a distinguishing feature of modern society, in the words of Foucault. This repression of sexuality coincided with the movement of society from a feudal to a bourgeois order. Bourgeois society, based on the principle of maximization of productivity, imposed restrictions on the frivolous squandering of one's energy in the pursuit of pleasure. It was from here on that 'sex' and 'pleasure' began to inhabit two different domains. Sex was seen only as a means towards the end of procreation, while its pleasure dimensions were completely repressed. It was only permissible as long as it was for a productive endeavour namely, that of procreation, which would ensure the sustenance of a labour force. Labour by this time had become a 'precious commodity'.

There was a censoring of the "authorized language" of communication within society, and power relations that operated in society laid down the rules of 'who' could say 'what' at which time and to 'whom'. Even though there was not an "utter silence" on the issue of sex, the levels of discretion and tact in the public sphere were far greater. The tightening up of rules led to a silence on the one hand, while on the other it produced a counter effect that witnessed the "intensification of indecent speech". Such was the degree of "multiplication of discourses concerning sex" that institutional apparatus were put in place to provide "incitement to talk about it...a determination on the part of the agencies of power to hear it spoken about, and to cause *it* to speak through explicit articulation and endlessly accumulated details" (Foucault 1978: 18). During the eighteenth century it was predominantly the responsibility of the Church (with the help of the 'confessional') to propagate an ascetic lifestyle among the people, but in the nineteenth century a number of new mechanisms (through the configuring of disciplines such as psychiatry, demography etc.) were devised in order to pursue this goal. The dramatic alteration in the 'nature' of the power structures in society is what confirmed the success of the exertion of this repression.

In the nineteenth century, sex became a phenomenon that needed to be managed, not just simply tolerated or condemned. It was reintroduced as something that required regulation so as to function optimally for the "greater good of all" and was "inserted into systems of utility" (*Ibid.:* 24). Sex, thus, became something that was actively administered in society[4] and its repression took place not through the "rigour of a taboo" but by insisting on the "necessity of the regulation of sex through useful and public discourse" (*Ibid.:* 25). Since nineteenth century conceptions of power were no longer based on the principle of "deduction"[5], it presented itself as a kind of power that was dedicated to the optimization of life, "subjecting it to precise controls and comprehensive regulations" (*Ibid.:* 137). The sustenance of this new power, therefore, depended on a reconceptualization of society itself. The reconceptualization was twofold. First, the body came to be seen as a machine that needed to be disciplined and controlled in order to maximize its productivity. It was integrated into "efficient and economic controls" that were made possible by the power dynamics that "characterized the *disciplines*". This is what Foucault refers to as an "*anatomo-politics of the human body*". The second related to the species as a whole. The body came to seen as infused with the "mechanics of life" and served as the "basis of biological processes". With this, issues pertaining to reproduction, birth and mortality rates, life-expectancy rates, level of health and longevity of life, began gain importance. Foucault refers to this as a "*bio-politics of the population*", the supervision of which was maintained through numerous interventions and controls. (*Ibid.:* 139)

With political power having pledged itself to the cause of "administering of life", wars were no longer waged with the motivation of defending the sovereignty, but for the

[4] This was isomorphic to the implicit reasoning that triggered the medicalization of childbirth. Since it was considered a manifestation of the work of 'nature', it needed to be controlled, regulated and administered, much in the same way that 'natural' resources and other facets of nature are manipulated to provide the maximum utility for humankind.

[5] Prior to the nineteenth century the notion of 'power' operated in a 'negative' sense, where the sovereign was authorized to levy taxes on "products, goods and services, labour and blood" (Foucault 1978; 136). The sovereign also had the authority to pronounce death at times when his sovereignty was directly threatened. Power of this kind was essentially based on the right of seizure. It could seize "things, time, bodies, and ultimately life itself; it culminated in the privilege to seize hold of life in order to suppress it" (*Ibid*).

perpetuation of life itself[6]. In the words of Foucault, "massacres have become vital" to the modern epoch, whose biological existence is seen to be at threat at all times. The discourse on population is a direct aftermath of the above-mentioned changes that were taking place in society itself. The discipline of demography thus made available a means to channelize regulatory control through a "useful", "public" discourse. Population emerged as an economic and political problem in the eighteenth century. It was now deemed as the source of wealth and labour power, crucial for the survival and perpetuation of the race (*Ibid.*: 25). The 'population' came to be viewed as a storehouse of valuable resources at the disposable of the state. Hence, variables such as birth and death rate, fertility levels, frequency of illness, dietary and habitation patterns became indicators of the general state of health, which located itself at the helm of the discourse on population. And at the heart of the preoccupation with population, was the discourse on sex. The regulation of sex became imperative for analysis of birth rates, age of marriage, legitimacy of births, the precocity and frequency of sexual relations, "the ways of making them fertile or sterile, the effects of unmarried life or of the prohibitions", and the impact of contraceptives. Sex was thereby converted into an analytical category to account for various other phenomena that were of grave import to the state and this was achieved through the pedagogical, social, political and economic institutions that were put in place primarily for this purpose.

The repression of sex was related to questions of morality through the eighteenth century, by the end of the nineteenth century there was an "entire political technology of life" (*Ibid.*:145) that had come up in order to sustain the control over sexual relations and the ends to which it was supposed to cater. The sexual conduct of the population became both the "object of analysis" as well the "point of intervention" from the beginning of

[6] The vocabulary used by doctors in the nineteenth century and twentieth century while tackling problems of health in general, and reproduction in particular, was very similar to the language of war. Instances of this are brought to light time and again in Oakley's work on history of antenatal care (Oakley 1984). "Military metaphors" first appeared in the medical setting in the 1880s and it reflected the social preoccupation with war and the masculinity of the ones who practiced medicine (Sontag 1977 as quoted in Oakley 1984: 107). This reference was not merely metaphorical as some of the initial methods used by obstetricians in this field were methods used during wartime to keep a track on one's enemies. An example of this would be the procedure of conducting the abdominal ultrasound was the same as those used to track down submarines (Oakley 1984: 156).

nineteenth century. Hence, through a "regime of discourse", through the mechanisms of power and knowledge working in tandem with each other, control over sexuality was maintained and the authority of the state expanded over many domains that were previously outside of the stranglehold of its power. One example of this would be the penetration of a "medico-sexual regime" in to the sphere of the family, where from the "care of nursing infants (maternal breast feeding and hygiene)" to the repression of children's sexuality to the "supposed dangers of masturbation" were all very closely monitored and regulated by the discursive offshoots of the state (*Ibid.*: 42-46). Not only was 'unproductive' sexuality put under the keen eye of the institutional mechanisms, but also any other form of 'unproductive' practices that would hinder the desired health standards of the population, which went on to include issues related to childbirth and pregnancy, which in turn, regulated the behaviour of women.

The developments in Britain in the early parts of the 1900s, just after the Boer War (1899-1902) in South Africa helps to illuminate the above argument further. The male population that had been recruited to fight the war were said to have extremely low standard of health, which heightened public debate regarding health conditions in the country (Oakley 1984: 35). From here on, the question of public health and national welfare were coupled together in a more visible way than before. Anaemia, flat feet and bad teeth were the main ailments that acted as an obstacle to Army service. The cause of all these ailments was traced back to poor feeding habits during infancy and childhood, which conveniently shifted the burden of pitiable health standards of citizens exclusively on to the shoulders of the women of the country. Thereby, the pivotal point of this public debate was spun around issues of "maternal ignorance" and "inadequate devotion to duty" (*Ibid*).

Even though the report produced by General John Frederick Maurice, which formed the basis of this public alarm, was discredited, a number of recommendations were made by the Interdepartmental Committee on the Physical Deterioration of the Population[7] for the

[7] The setting up of this Committee was a direct outcome of the initial British maternal and child welfare movements. The Committee sat for 26 days, took evidences from 68 witnesses and published its report in

surveillance and improvements of the nation's health. These included measures to deal with overcrowding, urban slums and smoke pollution and the availability of better statistical data relating to pregnancy and birth (which involved registration of stillbirths, infant mortality rates by location and collection of occupational data in relation to infant mortality). Keeping in line with the nature of debates that were taking place in the public sphere, the Committee also recommended systematic instruction for girls in infant feeding and management, and education for mothers in childrearing in leaflet form (*Ibid.:* 36). Over the course of the next few years a new philosophy began to emerge in relation to children as the "adult citizens of the future" and in relation to mothers as "the individuals whose wombs constituted the sancta sanctorum of life itself", that percolated in to the world of medicine.

What is interesting to note is that the provision of medical care was still not referred to in the 1904 Report presented by the Committee, which continued to perceive maternal education as a much more effective means of ensuring health of the population. However, the proposals relating to child welfare were translated in to a number of legislations like the Relief (School Children) Order of 1905 and the Education (Provision of Meals) Act of 1906. The Education (Administrative Provisions) Act of 1907 marked the state's advance in to an area previously regarded as private namely, that of the home and the family. As mentioned above, the emphasis on maternal ignorance and the need for educating mothers was still the predominant theme in most discussions on infant mortality. Apart from being a cheaper alterative to providing free medical care or improved housing, this was also a consequence of the perceptions of women's social functions. It came to be believed that women had little understanding of how to feed or care for their children hygienically and the 'proof' of this was the high diarrhoea death rate, as even though sanitary conditions had improved during the nineteenth century, the death rate had risen. Mothers were often deemed irresponsible for not consulting the doctor for advice on infant care and went out to work, instead of being with their infants

1904. Apart from looking in to the statements made by Maurice, the Committee was also entrusted with the task of assessing the role of the medical profession in securing the physical efficiency of the nation (Oakley 1984: 36)

(*Ibid.:* 37-38). These arguments put together contributed to the association of maternal behaviour with the high infant mortality rate.

One of the ways in which the state sought to deal with the problem of incompetence of mothers was by establishing new municipal run milk depots[8]. The foundational principle of the milk depot was the municipal control over the quality of milk "from before it left the cow" until it reached the homes of the people in municipally supplied bottles which was supposed to be used to feed the infant (*Ibid.:* 39) The mushrooming of milk depots thus, "aimed to cure one of the causes of maternal fecklessness, namely contaminated milk".

Alongside the establishment of institutionalized milk depots, came the simultaneous establishment of the principle of home visits in order to guarantee the success of the former. This was both, a "symbol and manifestation" of the state's newly acquired right to determine what goes on inside the homes of its citizens. Once health visitors and sanitary inspectors had been appointed to ensure hygienic infant feeding within the home, it became easy for their duties to extend beyond the nutritional realm to cover every aspect of housewifery and motherhood. It then becomes sufficiently clear that the safe milk movement was "never merely a collection of milk shops, but from the start a systematic investment in the monitoring of maternal behaviour" (*Ibid.:* 42). It was widely believed that the life of the infant could not be saved by the state, but only by the mother. In her endeavour to save her infant's life she could be helped and taught by the state. Although the ostensible curriculum was the correction of methods of childbearing and childrearing, it was came to be used as a justification for the exertion of social control over almost every facet of a woman's behaviour.

[8] The concept of the milk depot originated in France. In 1890 Professor Herrgott set up the first 'Consultation de Nourrisons' where mothers were encouraged to bring back their one month old babies for weighing and medical examination and were paid on a sliding scale according to the infant's progress. The first 'Goutte de Lait' was set up in 1892 by Pierre Budin. The three main features of the work of the 'Goutte de Lait' were weighing the babies, medical consultation and distribution of sterilized milk. In Britain the first milk depot was set up at St. Helen's in 1899. Similar developments were taking place in USA where Nathan Straus, who was also the pioneer of the movement for compulsory milk pasteurization, started the first milk depot in the year 1903. (Oakley 1984: 39-42)

By 1914 a shift in the language of maternal and child welfare began to occur where the older educational nature of intervention made way for a medical component. A circular of the Local Government Board (Britain) stated the desirability of infant welfare work that should be concentrated on the first year after birth and should continue until the child begins schooling. All areas associated with pregnancy, namely supervision of midwives, provision of antenatal care, home visiting of expectant mothers and inpatient care (in order of importance), were dealt with in this circular. Hence, the state's interest in motherhood from here on began at conception, or even before and ends with the onset of fulltime schooling, when the child is passed on to the school medical service for supervision. The principle was that of "continuous and systematic provision of antenatal care" (*Ibid.:* 45), through which the state could maintain optimal levels of supervision over the movements and activities of pregnant women.

As is made clear from the arguments of Foucault in the 'The Birth of the Clinic', the teaching hospital had been created as a crucial site in the newly restructured discipline of medicine. It was only but natural that the pregnancy related issues should also begin to get structured in a similar way within the hospital set up, with the hope that by admitting complicated cases clinicians could learn more about antenatal diseases[9]. This was one of the foremost arguments presented in favour of the medicalization process in its initial years. The admission of pregnant women in to a pre-maternity ward was also argued for in the light of the fact that it would provide working women with rest that would result in healthier babies (*Ibid.:* 47). Hence, the process of pathologization of pregnancy had been ushered in. By 1918 around 120 local authority antenatal clinics had been founded in Britain premised on the basic tenet of 'medical supervision'. These new centres were not designed for middle-class women or for those with complicated pregnancies, as they

[9] One of the first pre-maternity homes was set up by Dr. Haig Ferguson where he was responsible for the medical supervision of unmarried pregnant girls (50% of whom were under twenty). Having worked in this area, he was of the opinion that such facilities should be made available to all mothers (to include the 'morally upright' ones) as it could ensure lower preterm delivery rate, heavier average birthweight and a decrease in the incidence of neonatal mortality. He spoke against the National Insurance Act, as it would lead to an increase in the booking of midwives, which in turn would deny hospitals the opportunity to teach future doctors 'normal' cases of pregnancy, in his opinion. Ferguson was also the champion of related causes such as the restriction of women's education on the grounds that it injured their pelvic organs. (Oakley 1984: 51-52)

were expected to go to the hospital directly. It was mainly meant for the 'normal' working-class women who had midwife booked deliveries. These centres were therefore, intended to function as a vital place for midwifery work apart from providing antenatal assistance to pregnant women. By 1915 the Central Midwives' Board had made it a rule that midwives were required to enquire in to their patients' general condition during pregnancy and the local authority antenatal centre made for a straightforward way to achieve that goal (*Ibid.:* 56). Hence, evidence points us to the fact that the medicalization of childbirth took place by not only setting up new mechanisms (both medical and political) to oversee the behaviour of pregnant women, but also by regulating existing practices before completely doing away with them. The regulation of midwifery practices would be one such instance where the state began to directly intervene in the areas, which were earlier under the care of midwives. With the state getting a say in what goes on within the sphere of influence of the midwife, it gradually began to regulate the profession of midwifery itself, which finally resulted in the obliteration of this tradition altogether from the discourse on childbirth within the medical setting.

As stated earlier, the provision of good antenatal care, like the disciplines that materialized out of the discourse on sexuality post-seventeenth century (for instance the discipline of demography) was rooted in the belief that the survival of infants, male infants in particular, was an imperative for the country's overall survival as they would be not only the future citizens but also the future soldiers of the nation. Infant mortality rates had been on the decline since 1915, but this could not be simplistically attributed to the motherhood surveillance system that was in place by this time. There was a drop in infant mortality rates all over Europe during this period and there was a lot of debate over the reasons behind it. It was also argued that the answer lay in the quality of air (drop in atmospheric pollution) (*Ibid.:* 60-61). Yet, there could be no singular explanation for the occurrence of this phenomenon, and the absence of a conclusive resolution of this debate proved that it had to be a combination of multiple factors.

At the close of World War I, it was quickly realized that a decline in the death rate of infants did not automatically imply a decline in the maternal mortality rate. This

prompted a further shift in the focus of antenatal care in the West, which began to pay greater heed to maternal mortality. The definition of death or illness comes to be seen as potentially 'avoidable', much in the same way as the larger discourse of medicine was being set u This gave a direct impetus to the process of medicalization of childbirth through a legitimization of the entry of medicine in to unchartered domains. Dr. Campbell presented a report in the year 1924 that was the first national 'confidential enquiries' exercise in to all maternal deaths in Britain where she investigated all maternal deaths that occurred between October 1921 and December 1922. After looking at a host of factors such as occupation of the women and cleanliness standards within the home, she reached the conclusion that the high rate of maternal mortality could be directly related to a total absence of any provision of antenatal care for these women. Even when such care was available to these women, it was somewhat of a "perfunctory" nature. Oakley, in her work on the medicalization of antenatal care criticizes the methodology used by Campbell, as there was no evidence of the fact that the death rate was lower among women who did receive antenatal care. It lacked a comparative analysis between the pregnancy histories of women who did receive, as opposed to those who did not receive antenatal care. However, what this study did was that it brought to the notice of the officials the poor condition of the provision of antenatal care in the country.

As a result, a number of civil society movements emerged during this period that took up the issue of rising maternal mortality. Many feminist organizations rallied behind it and argued that high maternal mortality rates were merely the tip of the iceberg when it came to women's health issues. They believed that women's health was in a deplorable condition at the time not only a consequence of depressed living conditions but also the lack of access to free medical care for working-class women. Two reports published in 1930 and 1932 by the Departmental Committee on Maternal Mortality and Morbidity implicated the patient's own negligence as the main cause of high maternal deaths (*Ibid.:* 72). The patient's ignorance that manifested itself in the form of non-attendance was perceived as the chief problem and for the antenatal system to work it was realized that the education of mothers was absolutely necessary along with the provision of good care.

It was made to seem that women themselves were unwilling to participate in a system that provided them with a better chance for survival.

Hence, twenty years after the founding of the first antenatal clinic, there was an overwhelming feeling of cynicism and cautiousness regarding its achievements. The initial opinion that antenatal care was the universal panacea of all reproductive ills gave way to the notion that it alone would not be able to achieve much. Problems related to maternal mortality now began to be located within a much larger frame of reference, and social factors were also taken in to account. Income, nutrition, unemployment and other such factors began to feature in debates on maternal mortality rates (*Ibid.:* 89-91). On the one hand, questions of the inadequacies of antenatal care were being initiated and there was an attempt to bring the woman back in to the discourse on childbirth[10], while on the other hand, there was a greater use of technological devices and methods to deal with the 'problem' of childbirth. For instance, hormonal testing of pregnancy began to gain ground alongside the regular use of x-rays in antenatal clinics to determine what was going on inside the womb of the woman[11]. The case notes of the 1930s from antenatal clinics did not indicate that the clinicians of the time anticipated the kind of technological revolution that was brewing in the field of obstetrics. Over the next few decades the technological boom that came about gave obstetricians an "unprecedented degree of control over the hitherto mysterious workings of the womb" (*Ibid.:* 95)

World War II made its own significant contributions to the field of obstetrics. Wartime evacuation provided momentum to the framing of a number of social policies and saw the

[10] "We need to get our antenatal work into focus, remembering that the process of childbirth is a continuous one...Antenatal care is an essential part of obstetrics, not a specialized stunt by itself, and the expectant mother is not an ambulant pelvis, but a woman with human needs, whose soul and body are closely interlinked...let us not forget the mother" (Lancet 7 July 1934: 1198 as quoted in Oakley 1984: 90). The stating of the need to bring the 'mother' back in to the folds of the ongoing discussions on antenatal care illuminates the fact that by this time she had become a mere appendage in this debate, a debate where she should have always occupied the centre stage.

[11] With these developments women were no longer required to help the doctor by expressing their 'gut feeling' about whether they were pregnant or not, an occurrence that was quite common in the past. Now the doctor could directly see movements inside the woman's womb thereby rendering her somewhat unnecessary in the whole medical discourse since the doctor now knew what was best for both the child and the mother. Hence, her preferences were pushed to the margins and the opinion of the expert came to dominate the field. Such a trend that started with the inception of technology in to this area of medicine, or maybe even earlier to a certain extent, can be seen in practice even today.

rise in the use of antenatal care facilities throughout Britain. For the first time in the history of the country people from different social classes, regions, occupational backgrounds, religious affiliations all thrown together because of evacuation measures. This brought to the notice of the state the appalling condition of mothers and children in the homes set up for them during this time, which were removed from their normal environments resulting in large scale displacement. Such a realization on part of the state led to a perceptible widening of government responsibility in the alleviation of distress of all kinds among all classes (*Ibid.:* 116-121). A direct outcome of this was a return to pre-twentieth century notions of antenatal care. Dietary habits of mothers and children once again got emphasized in the war setting and the government started many subsidies in order to ensure healthy feeding habits. Measures such as the setting up of a National Milk Scheme were introduced along with a vitamin welfare scheme. Food rationing also contributed considerably to the project of generating a healthy population, where expectant mothers and children were entitled to more than the normal weekly allowance. The average condition of health went up during the war, and a public consensus was shaped around this to make sure such standards of health continued even during peace times. Many beneficent forces came together at this time to protect the health of mothers and children by ensuring full employment, food subsidies, price controls, welfare foods and no disastrous epidemics (*Ibid.:* 122-127).

However, there was one not so desirable outcome of during this time, from the perspective of the state. Although they had taken every possible measure to guarantee better quality of the population, yet the quantity was far from what was preferred. There was an alarming fall in the birth rate by 1944 attributed to many varied factors of socio-economic nature. The discourse on childbirth in the post-World War II setting had moved away from the clinical nature of antenatal care to a more holistic one as it had been satisfactorily proved that antenatal care was not the "miracle answer to an elastic range of problems" (*Ibid.:* 131). It was against such a backdrop that the National Health Service Act was passed in Britain in 1946. What this meant was a removal of the constraints of the insurance principle and made access to an integrated health service free of cost for the

user. This was seen a measure that would go a long way in improving reproductive survival and health.

The trend of increase in the number of women seeking antenatal care from the time of the World War II continued through the 1960s and still continues. The standards of antenatal care practice was undergoing rapid changes with women seeking care at earlier stages of their pregnancies and the introduction of blood tests being made routine, along with a host of other changes. However, no substantive data exists regarding the kind of care that was received by these women who opted for antenatal attention. The notion of pregnant women seeking antenatal care as 'consumers' was just beginning to take shape thereby giving rise to the debate on consumer satisfaction. The period between 1960 and 1980 has been termed by Oakley as the "reign of technology" with respect to the way in which technology made its overwhelming existence felt in the field of obstetrics. A critical examination of this phenomenon that can be seen at work till today has been discussed at length in the next chapter. But before taking up an assessment of this technological era in the history of antenatal care in the West, it becomes necessary to look at the course of the history of pregnancy and childbirth in the colonies of the West which this next segment of the chapter will seek to analyze.

II

The activities in the colonies with regard to pregnancy care practices were informed by the exact concerns as they were back in the home countries. Most of the colonies of the West were afflicted by high infant mortality rates on the one hand and low birth rates on the other, giving rise to the crisis of depopulation (Van Hollen 2003: 36; Hunt 1988: 404). As mentioned earlier in this chapter, the trend of professionalizing obstetrics in the West, was a direct fallout of the obsession with national populations, especially during the post-Boer War phase. It came to be felt that the average health of the population was deteriorating, implying that the labour force as well as the army of these nations was be below par. The anxieties in the colonies were a precise replication of this and there was a

growing interest in childbirth practices in order to ward off the depopulation trends. This was seen to be a severe threat to the capitalist enterprise that formed the underlying logic for the mission of colonization by not only diminishing the labour force, but also making for an unhealthy and weak proletariat class in the colonies (Van Hollen 2003: 36). Thereby, according to Van Hollen, the management of childbirth constituted a core issue in colonial discourses in India like it did in other colonized countries like Jamaica, Sudan, Malaya and the Pacific Islands.

Questions of maternal and infant care were entwined with larger economic interests of the colonial state. In India, both colonial officials as well as the nationalists directed their angst towards the "deplorable" condition of childbirth and used it to propagate and "legitimize their own economic and political goals in the name of protecting the "vulnerable" members of society, i.e., women and children" (*Ibid.*). While the former blamed Indian 'customs' and 'traditions', the latter blamed the colonial state's "extractive economic policies and unequal distribution of health services (*Ibid.*: 36-37). The answer for both camps was the "professionalization" of the discipline and practice of obstetrics. In the late nineteenth and early twentieth century the discourse of on childbirth, Van Hollen (2003) argues, was concerned with questions of how it could be brought into the folds of the "emerging allopathic medical establishment". It has also been stated that this was a clear break from the earlier approach of trying to collaborate two systems of medicine, namely allopathy and the indigenous practices. By this time, the superiority of allopathy was being asserted at the cost of the indigenous medicine. Van Hollen (2003) claims that apart from the fact that new scientific discoveries set apart allopathy from other indigenous practices, the popularity of the eugenics movement also informed the belief that the Western style medicine was critical to emphasizing racial superiority.

The vilification of the midwives from thirteenth century onwards that took place in various corners of the West had a considerable impact on the colonial perception of indigenous birth attendants (*dais*) of South Asia (*Ibid.*: 40). The indigenous birth attendant, in the context of a reformulation of the process of childbirth, was faced with a further challenge of having to compete with the 'white' allopathic doctor in the initial

years of the professionalizing trend. Birth in India was mostly supervised by the elderly female relatives and neighbours of the woman giving birth. In most cases the birth attendant would be called in to cut the umbilical cord and for the disposal of the placenta, an act which was considered ritually polluting, thereby allowing for only low caste women to perform this task (this theme has been explored extensively in the third chapter). However, the birth attendant would also be called in to provide her services in the eventuality of a complicated delivery. There was no pan-Indian category of the '*dai*' that could be equated with the category of the 'midwife' of the West, but during the late nineteenth century, colonial administrators, missionaries and medical professionals began to club the many different categories of birth workers in the South Asian region, under the single head of 'dais'[12] (*Ibid.*). In colonial discourses, the *dai* was repeatedly portrayed as being "barbaric" and "inherently dirty" because of her low caste status and the high rates of infant and maternal mortality was attributed to her being, the primary caregiver at most births.

The 'training' of traditional midwives had been an agenda of the 'civilizing mission' from the 1860s onwards, writes Von Hollen (2003), mediated by the missionaries and civil surgeons, while the first systematic effort to train *dais* came from the Victoria Memorial Scholarship Fund. The initial plan for the restructuring of childbirth in India was a "gradual" one, through the training of traditional birth attendants, educating women in matters of hygiene, so on and so forth, since it was widely felt by the colonial officials, as a result of post Mutiny (1857) reflection, that they had been too hasty in setting up "British-style institutions" in India (*Ibid.*: 48). Instead, it was decided that they would "move into the into the inner spaces of Indian society in order to gradually transform and reform" them by not only replacing the traditional methods with medical knowledge and ideas of modern sanitation but bringing about a change in the overall morality of the

[12] Stacey Pigg explains how this continues to occur in today's context, where international development projects in Nepal have created the category of 'traditional birth attendant' (TBA) subsuming all the other varied categories of local healers. When translated into the local language, the TBA was referred to as the *sudeni*, which was originally only one kind of healer who was involved in the birthing process (Von Hollen 2003: 41). This was bringing about a change in the use of terminology, much in the same way as it occurred under the colonial regime in various parts of the colonized world, making it tougher to unearth the reality of their social status and skills even further. For a more detailed analysis of this point refer to the third chapter of this dissertation.

population which was now supposed to erected on the lines of an European morality (*Ibid.*). A replacement of traditional methods with modern medicine subsequently implied a replacement of one kind of practitioner by another. Although the categories of the 'midwife' and the '*dai*' cannot be transposed, the nature of displacement experienced by them, from their sphere of expertise with the rise of a new professional class of obstetricians, can be seen as similar in many ways.

The impact of reforms and policies promoting the professionalization of obstetrics, the final outcome of which was the ostracization of the *dais*, was mediated differently in India than in the West, by virtue of factors which were specific to the Indian reality. The British resorted to two main tactics in their bid to bring childbirth within the folds of allopathic control. First, efforts were made at increasing the number of Western trained doctors, nurses and nurse-midwives which was accomplished with the inception of Countess of Dufferin Fund of 1885. Second, training was sought to be provided to the "hereditary *dais*" with the introduction of the Victoria Memorial Fund initiated in the year 1903 (*Ibid.*: 42). Von Hollen (2003) argues that while the former was "intent on training a new cadre of midwives who were not hereditary *dais*", the latter focused more on those midwives who were already practicing their craft in the field. The mediating factors, however, that needed to be taken into account while analyzing the effect of both these funds were those of *purdah* and caste.

The Dufferin Fund realized the need to train medical women in India because of the recognition of the practice of *purdah* which prevented women from seeking care during the time of childbirth from a male medical practitioner. This fund, as has argued by Maneesha Lal, brought out the contradiction that existed in the implementation of British policy in India (Lal 1994: 41-42 in Von Hollen 2003: 45). While the 'civilizing' enterprise of the British perceived the *purdah* as a symbol of India's "barbarism", the Dufferin Fund still strove to accommodate this practice within their scheme. Since, in India, *purdah* was primarily practiced by upper-caste Hindus and Muslims, the implication of the finer points of the Dufferin Fund was that it was intended for the purpose of serving the upper-caste sections of both religious communities. One of the

provisions of the Fund was the setting up of female supervised maternity wards, which when started was crowded with women from the lower castes and classes (*Ibid.*: 44). So as to lure the women of higher castes, hospitals began to establish separate wards for members of the higher caste groups. This was done so that allopathic maternity care could be institutionalized as a respectable and eventually hegemonic practice, in the years to come (*Ibid.*). The belief that for childbirth care to be made use of by Indian women, it was necessary to establish a class of female medical practitioners and initially most of the women who benefited from the educational and employment opportunities provided by the Fund were of British origin[13]. With this as a precedent, consequently Indian women were encouraged to join the field of obstetrics. Reminisces of this can be seen at work even today with a large number of women opting for obstetrics and gynaecology as their area of specialization within the field of medicine as opposed to the more 'challenging' and necessarily 'masculine' specializations, such as neurology for instance. In the West the case was reversed where obstetrics had predominantly become a male profession.

As mentioned earlier, in the post-Mutiny phase, the colonial state had realized the importance of training *dais* in keeping with the religious sentiments of the masses (*Ibid.*: 48). It came to be felt that the best way to achieve change was through education so that the public *desired* the change for themselves. The Victoria Memorial Fund aimed at achieving precisely this. However, training and education was not merely restricted to the *dais* but came to include the training of women as to how to be 'good' mothers, a theme resonating the one of primary preoccupations in West of the professionalizing phase. Von Hollen writes, "the private sphere of women, and in particular mothers, became a great new frontier for colonists during this period of High Empire following the Mutiny" (*Ibid.*: 49). Referring to the "private sphere" as the "dark", "inner recesses" of women's space played on its association with bad sanitation and the "darkness and stuffiness of the space" in which women gave birth (*Ibid.*). It was felt that these women could be rescued form this "darkness" by educating them in the benefits of Western medicine and notions of hygiene and sanitation. As in the West, public consensus was being created in the

[13] Von Hollen refers to Lal's work that suggests women practitioners faced severe competition in Britain from their male counterparts because of which they migrated to India to study and practice medicine, a point many a times overlooked by historians writing on that period (Von Hollen 2003: 45)

colony around the idea that the fate of the nation's progress lay in the "minds and bodies of India's women" (*Ibid.*).

The education of mothers in the late colonial period managed to weave in the notions of 'morality' and 'ignorance' into the heart of the discourse. Information was disseminated regarding 'mothercraft' which included topics from child feeding and rearing to housewifery and needlework (*Ibid.*: 51). It has been argued that 'native' women were perceived as being bad mothers because of the *ignorance* and not because they were *immoral*, and the distinction between *morality* and *ignorance* was repeatedly drawn on while judging Indian mothers. Various mechanisms were put in place in order to ensure that the message of 'mothercraft' or the art of child rearing spread across the colony which included the National Health and Baby Week celebrations initiated in the early 1920s. Von Hollen argues that many of the 'mothercraft' programs were structured on the lines of similar programs in America and England, the agenda behind which was to get women to view their children as 'future citizens' and to "care about their well being not only on a personal level the but for the sake of the nation" (*Ibid.*: 51). She asserts that the Indian mother emerged as an *ignorant* but "*malleable* and potentially *reformable*" character, unlike the *dais*, who were perceived as being an "*ignorant* products" of tradition with rigid opinions acting as obstacles to progress (Ibid.: 52 emphasis added).

Margaret Jolly puts forward the notion that "modernizing maternity" did not merely mean "the medicalization of pregnancy, birth and the postpartum period but also the discipline of *mother love* itself" (Jolly 1998: 4). Similar kinds of narratives, relating to the processes of professionalization and medicalization of childbirth, were being shaped in other colonized nations across the world. Intervention in the birthing process led to a control of the female body which was now put under the surveillance of an 'other', who, according to Jolly, was inevitably of a higher race and class than the patient, within the colonial setting (*Ibid.*). The reformed approach to pregnancy and childbirth affected among other things, feeding patterns of infants and children, modes of disciplining them as opposed to the notion that 'native' mothers indulged their children, while women were instructed to reserve their maternal affections only for their own children (*Ibid.*). Thus, it becomes

clearly evident, as argued by Jolly, that "from the colonial period new forms of 'rationality' applied to maternity and Eurocentric forms of psychology promoted which proclaimed the earlier forms of mother love as sloppy, deficient or irrational" (*Ibid.*).

The resounding echoes of the presumptions regarding 'bad mothers' could be heard in the different colonies of the West. The discourse on the interventions in the lives of working class women in Britain and colonized women in Asia and the Pacific was almost identical (*Ibid.*: 9). On both counts, mothers were blamed for the persistence of high infant mortality rates and the subsequent rise in depopulation trends. As a result, mothers from both Britain and the colonies were perceived as "deficient" on the grounds that they lived in dirty and dark houses, practiced unhygienic forms of birthing and nurture, were poverty struck, or as Jolly asserts, merely for being workers and mothers (*Ibid.*). It has been stated above that the motivation underlying such a discourse was the fear of losing out on '*manpower*" required for the manning of the machines of industry and war (*Ibid.*). In the colonies there was also the added concern of reproducing 'healthy' workers as the cost of replacing labour from overseas was too great for the capitalist enterprises to consider it an option. However, Jolly points out that the concern for population, in both the "metropole" and the peripheral colonies, was not merely related to questions of building a strong labour base but was connected to the larger issue of "governing of life", the ultimate aim of which was to establish self-governance through 'compliant citizen subjects" (Ibid.: 10).

The above argument can be further elucidated by way of the example of Belgian Congo and crisis of depopulation in the 1920s. It was widely felt that a "sufficient population was an absolute necessity for the colony's "harmonious development"." (Hunt 1988: 404). The solution for the problem of high infant mortality rates was sought with the setting up of puericulture, *gouttes de lait* and infant consultations. This, as Hunt argues was not a new approach to tackling the problem of decreasing population, but a "transposed one" (*Ibid.*: 405). France, England and Belgium had all witnessed similar changes sweeping across their countries when considerable concern was raised over issues of depopulation and infant mortality. The problem was pinned to the *ignorance*

and *negligence* of the mothers, especially those belonging to the working class, while 'mothercraft', infant milk depots and well-baby clinics were seen to be the cure. Motherhood, according to the author, had been redefined during phase as a result of the kind of changes that were coming about and child rearing had gone from being an individual's 'moral' responsibility to a 'national duty' (*Ibid.*).

African women were prone to abstain from sexual relations for up to two to three years after giving birth. Polygamy was also an encouraged practice amongst the Congolese people (Ibid.: 406-407). The latter was considered to be a fallout of the former and the Europeans could not fit in these practices within their culturally specific 'moral' or social scheme. The family structure of African communities began to undergo changes with the promotion of monogamy and education of couples in the duties of the spouses, a course of action that was primarily informed by European sensibilities. The other factor for prolonged lactation and sexual abstinence was seen to be a severe lack of food, particularly milk (*Ibid.*: 408). The colonial project to make other food available to children by distributing milk and milk products, thereby making the mother's milk "dispensable", was one of the tactics adopted to combat this problem (Ibid.: 409). Apart from this, people were also encouraged to raise dairy livestock that resulted in changes in the economic structures as well.

Hunt (1988) believes that the availability of milk of milk and infant health programs were not only done to benefit African women but also in order to enable the presence of European women. However, the programs that were available to the 'white' women were never exactly the same as the ones that were meant for Congolese women, making the disparities based on racial factors apparent (*Ibid.*: 415). For instance, Crèche Prince Leopold in Stanleyville served the needs of European women for fresh milk, at the same time serving as a nursery for African children. The irony was that while a stock of dairy goats would be "assembled to nourish the larger African children...African women were encouraged to become wet nurses for other women's children" (*Ibid.*: 415-416). Thus, colonialism entered the inner most spaces of Congolese life by restructuring their birth processes, breast feeding habits and weaning, dietary choices and sexual activities, much

in the same way as the lives of women in the West were affected less than a century before.

The history of medicalization of birth in the West and in the colonies hence, was based on the same foundations, namely a fixation with infant mortality rates and the threat of depopulation, leading to similar outcomes, at least to the extent that the professionalization of obstetric care displaced the female traditional practitioners from the scene in both contexts and the reshaping of the discourse on motherhood to give rise to the notion of a 'good mothers'. The next chapter will take up some of the points that came up in the above section and discuss it in a more detailed manner. The chapter opens with an analysis of how midwives were marginalized in the West from the beginning of the thirteenth century and professional rivalry that transpired between two classes of practitioners, namely the midwives and the male medical professional. From here, there is a transition to twentieth century happenings in the world of obstetrics referred to as the "reign of technology" by Ann Oakley (1984). The chapter carries on from there to focus on the very specific practices revolving around cord clamping and delivery of the placenta, which forms the central theme of this dissertation. With an intricate analysis of nineteenth century texts to the latest World Health Organization manuals, the dilemmas that plague the science of obstetrics are brought to forefront.

Chapter Two

Ingress of the Instrument, Displacement of the Midwife:

The Growth of New Reproductive Technologies and the 'Management' of the Third Stage of Labour in Modern Obstetrics

The second half of the twentieth century saw a phenomenal rise in the use of technology in the field of obstetrics. The ideas and inventions that were in their nascent stages over the last century evolved to take their final shape by the 1960s. The development of the discipline of obstetrics paralleled the growth in the use of the mechanical metaphor to conceptualize the human reproductive body (Martin 1989: 54). As Emily Martin (1989) argues the use of the mechanical metaphor to understand the uterus was complimented by resorting to the use of actual mechanical devices during the delivery process. The origin of the a mechanistic view of the body can be traced back to the seventeenth and eighteenth century that was carried forward into the medical practice of twentieth century.

The second section of this chapter will discuss at length some of the monumental technological advancements that occurred during the twentieth century, which made an impact on the discipline of obstetrics and in doing so, critically assess the fallouts of these developments. But before one takes up such an analysis, there arises a necessity to briefly trace back the history of the process of marginalization of midwives in the West. Hence, this chapter begins by going back to a different temporal setting, a time when the midwives were gradually being made into peripheral players in the entire business of birthing. The processes and techniques through which male medical 'professionals' usurped the area of influence of the midwives and how they succeeded in almost entirely

annihilating them from the scene has been dealt with in this section. The final segment is dedicated to an analysis of the practices revolving around the cutting of the umbilical cord and delivery of the placenta within modern medicine. Through a detailed scrutiny of this particular moment in the process of birthing a number of important questions get raised regarding the very basis of these practices and the ends that they seek to serve, apart from bringing to life some of the arguments made in the first section of this chapter.

I

In the world of the ancients, childbirth was regarded as a female mystery and women alone possessed special knowledge and understanding relating to it. Deities such Isis, Juno Lucina and Diana were invoked during childbirth and women prayed to them for safe deliveries. Jean Donnison (1977) writes "from time immemorial women have helped each other in childbirth, and midwives have been recorded from the beginning of history". Birthing, until relatively recent times, was primarily "women's business" (Donnison 1977: 1). Women did not simply restrict themselves to midwifery practices and had been traditionally associated with the healing arts in general. From Graeco-Roman times until the medieval period in Europe, women practiced general medicine and some even attained great repute as surgeons and obstetricians (Ibid.). While the practice of medicine and surgery was mostly taken up by nuns of local convents and by the lady of the manor as charitable enterprise, there were women who also practiced for money. Donnison (1977) argues that up to the thirteenth century the field of medicine was open to all, men and women alike, irrespective of their education and training. The only difference was that a 'better educated man' was able to acquire a license granted to graduates in medicine by the Universities of Oxford and Cambridge. This license conferred the title of 'Doctor' or 'Physician' and permitted them to practice anywhere in the country (Ibid.: 2). However, there were no such options available to women for the acquisition of any official recognition of their medical skill and status.

The other development of the thirteenth century which had a long lasting impact on the business of birthing was the formation of the barber-surgeons' guild which regulated the surgical practice where the guild system was in force. Women were rarely allowed into the guilds and as a result, their representation in these spaces was almost negligible (Ibid.). The other direct fallout of the formation of these guilds was that the *official* right to use instruments was restricted only to the surgeons, registered under them. The surgeon, therefore, came to be the person who would be called in for deliveries which could not take place naturally. This was the beginning of the downfall in the professional status of the midwife. As the surgeon was only called in for 'abnormal' deliveries, he had very little scope for gaining any kind of substantial knowledge about the process of parturition. This, along with the fact that not many in the countryside could actually afford a surgeon, meant that the midwife still had a certain amount of standing in society, right up till the seventeenth century (Ibid.).

Midwives necessarily were women of middle age or older, who had themselves borne children, as till the seventeenth century, personal experience was still regarded as the most important qualification one could possess when it came to birthing related matters. The reasoning behind these requirements was that an older woman, having gone through childbirth herself, might have been called for births of friends and relatives, a tradition that was present amongst all social classes. Donnison (1977) argues that the prevalence of such a custom fulfilled many needs that arose when a woman was about to deliver. First, it took care of the need to have a number of experienced women present at the site of birthing to offer support during a critical time in a woman's life. Second, the presence of older women at the time of birth also served educational purposes that were so scarcely available to women in the first place. This practice ensured that the midwife, who was still the sole caregiver to a large part of the population, had proper knowledge regarding childbirth before she went to attend a birth. Third, these women also acted as witnesses to the birth at a time when child substitution was rampant to ward off the social stigma of being childless. This also worked to prevent the mother from being accused of having herself caused her child's death. It was finally, a way of being involved in

neighbourly celebrations, which was at that time a welcome change from the mundaness of daily activities.

Maturity, Donnison (1977) explains, might have also been of prime importance to the Church, which in medieval and post-Renaissance Europe wielded great power over the private morality of people. As a result, the religious orientation of the midwives was a matter of grave significance and in the opinion of the Church, a 'good moral character' was a prerequisite for being a midwife. Through the midwife, the Church sort to maintain its control over the local populations. Midwives were asked to keep a strict watch on the women and anyone who fell short of the chastity standards laid down by the Church was to be reported (Ibid.: 4). They were forbidden by the Church from performing abortions of any kind and they were to do everything in their capability to get a mother to name the father of a 'bastard child' so that he may not shirk his responsibilities. Apart from this, the Christian requirement of baptizing infants implied that when an infant died before it could be taken to the priest, it was the responsibility of the midwife to baptize it (Ibid.). In addition, the fact that the umbilical cord, caul, after-birth and stillborn fetus were potent substances with respect to witchcraft[1], the Church's control over the activities of midwives was further strengthened and any kind of aberration from the prescribed code of conduct was not tolerated.

By the fifteenth century the regulation of midwives was no longer restricted to the Church. Many cities of Germany and the Netherlands appointed City Physicians who were entrusted with the job of controlling medical practice and attending to the poor (Ibid.: 5). In 1452, the first municipal system of midwife regulation of Europe was established in the city of Regensburg. This became the norm over the next hundred years. Even with the setting up of a municipal regulatory system, some of the old codes were still maintained, such that midwives were still required to prove their 'good character', and continue to not perform abortions or magical rites. However, with these systems in

[1] Historically midwives have been vilified in the public memory of Europe and America, along with other female healers who were all accused of witchcraft. This happened in the wake of the establishment of the secular science of medicine and its emergent elite male practitioners. By the seventeenth and eighteenth centuries, midwives had been singled out as a danger to society (Von Hollen 2003: 40).

place, questions of technical competence got more attention than during the days when midwifery was under the sole regulation of the Church (Ibid.). The first formal arrangement for the regulation of midwives occurred in 1512. The Act of 1512 set up a system of licensing for skilled and approved practitioners and also had the power to punish those practicing without a license. The responsibility of implementing this Act fell on the Church as no other body had the warewithal to monitor the activities on such a large scale, along with the fact that the Church had direct stakes in curtailing witchcraft which they could now do more efficiently with the help of this Act (Ibid.: 5-6). Individuals seeking a license were expected to go through an examination conducted by the local Bishop. As already mentioned, those practicing without a license were liable to punishment in the Bishop's Court. Although midwives found no separate mention in this Act, they were still granted licenses on the basis of the fact that midwifery was considered a part of surgery. This new system, like the earlier one, was very much based on earlier notions of the role of a midwife paying more attention to her social and religious functions rather than towards providing instructions which were of a therapeutic nature. Not much is known about the personal circumstances of the midwives prior to the seventeenth century. While some underwent training by accompanying their mothers to work, others took it up to supplement their husbands' income (Ibid.: 8).

By the seventeenth century, changes precipitated by developments taking place in society at large began to affect the practice of midwifery. "The spirit of enquiry which the Renaissance had brought to other branches of medicine", writes Donnison (1997), was being extended to understanding the process of childbirth (Ibid.: 10). The new scientific study of anatomy had swept over processes of birthing where now, as a result of the pioneering work of Ambroise Pare (1510-1590), surgeon to the King of France, there was greater understanding of the mechanisms of labour thereby paving the way for future advances in operative obstetrics. These changes that were being brought about could not be attributed to the work of the midwives, but was the result of the advances made by men which further encouraged their entry into the field of operative midwifery (Ibid.). As a separate branch of surgery, operative midwifery first emerged in France but gradually the trend spread through out Europe. In England, a new class of practitioners emerged,

who were considered to be experts in the field operative midwifery, by the early seventeenth century. It was around the same time that the word 'Man-Midwife' was incorporated into the English language (Ibid.). Although at this period, male surgeons or physicians were still called in for only difficult or 'abnormal' births, the process of marginalization of the midwives was already underway.

Over the years, various attempts were made to organize and regulate the work of midwives with the help of a dedicated Society for them. All of these proposals were eventually shot down either by the College of Physicians or by the midwives themselves. While the College agreed to the need to regulate the activities of midwives, it also felt that recognition of this sort would imply an elevation of their status in society as skilled professionals, which it was unwilling to concede. On many occasions the midwives themselves resisted the formation of such a body as it meant a diminished degree of autonomy as they would be under the constant supervision of both the Church and the College of Physicians (Ibid.: 13-14).

There were several factors that could be accounted for the marginalization of the midwives by the end of the seventeenth century. First, the educational advantages that were enjoyed by men were much greater as compared to women and by virtue of this fact, men came to be preferred over midwives, who were seen to lack both theoretical as well as practical knowledge (Ibid.:17). Second, at this point of time it was still preferred for midwives to be of a 'mature age' and to have borne children of their own. Such a prerequisite implied that women who would be taking up the profession of midwifery would be well past their "learning peak" (Ibid.: 18). Apart from this, they were also seen to lack the scientific temper which required complete commitment towards the goal of scientific discovery and progress, because of the restrictions imposed on them by domestic ties (Ibid.). Hence, by the turn of the next century the professional standing of the midwife in society was on shaky ground.

The eighteenth century witnessed major changes in terms of childbirth practices. First, the mushrooming of a number of lying-in hospitals which emerged out of the "initiative

of *medical men* seeking a ready source of *clinical material* for their own and their pupils' study" proved to be a further set back for the midwife (Ibid.: 25 emphasis added). The invention of the midwifery forceps in the year 1720 accelerated the process of marginalization. The forceps enabled surgeons to not only be called in for abnormal cases, where either the baby or the mother or both had died, but also in normal cases. They were able to deliver live infants in situations where previously they would have lost either the baby or the mother and were even able to shorten painful labour (Ibid.: 22). Forceps became an important element of midwifery practice, which only the surgeon had access to, since the privilege of using instruments was restricted solely for guild members as mentioned at an earlier point. Donnison (1977) argues that along with these developments, another factor that needed to be accounted for was the constant bringing into the public eye the exaggerated dangers of childbirth. This task primarily rested in the hands of the male physicians and surgeons who in order to secure their importance at the site of birthing stressed on the unpredictability and threats of childbirth, necessitating the presence of male attendants at the event.

The trend of exaggerating the dangers of birth was a trend that carried on right through the next two centuries, by the end of which time the site of birth had been totally 'sanitized' of the presence of the midwife. Having laid down the brief history of the process of the marginalization of midwives in this section, the following segment continues from where the last chapter had come to a close, in attempting to trace the developments through the twentieth century which went on to complete the process of medicalization and technologization of childbirth.

II

The revolution that had been brewing from the 1940s onwards reached its climax by the 1960s, by which time the world of obstetrics had come to rely heavily on professional techniques of managing reproduction. According to Oakley (1984) even though the all the aspects of birthing were affected by these developments to a great extent, the

revolutionizing of technology with respect to antenatal care was by far the most significant. It managed to completely dispense off with the mother as a key intermediary in the process of 'knowing' the fetus. Armed with the latest technology, doctors could now make direct contact with the fetus, completely bypassing the mother. By the 1940s hormonal pregnancy tests could establish the existence of a fetus within the woman's womb, the heartbeat of the fetus could be heard through the stethoscope while the skeleton could be visualized by the use of X-rays (Oakley 1984: 155). Apart from this all other knowledge was acquired through the mother by "asking her questions, by clinically examining her abdomen and by laboratory examination of her metabolic products" (Ibid.). All of this was rendered obsolete with the emergence of technologies such as the ultrasound, fetoscopy, hysteroscopy, amnioscopy and others that enabled obstetricians to directly reach the fetus.

Ultrasound or 'sonar' (sound navigation and ranging) was originally developed as a technique to track submarines during World War I in 1916 (Ibid.: 156). The same method was used to 'track' the fetus within the womb of the mother. Ian Donald, one of the main people to put this technology to use for reproductive diagnosis[2] went to the extent of stating that there was not much difference between a fetus in *utero* and a submarine at sea. The technology that was used for metal flaw detection was one of the first methods used by Donald to test whether ultrasound could be used to differentiate between different kinds of tumours inside the human body. His contention was that if it worked on metal it would also work on human tissues (Ibid.: 158). Oakley (1984) quotes a section from his writings where he recounts the first time he used a metal flaw detector to diagnose patients with tumours and says that "They'd come along with a big lump inside and I used the metal flaw detector which I borrowed from their factory. We even used the same kind of disgusting gear oil on their tummies to act as an acoustic coupling medium. We used transformer oil...". He, along with many other obstetricians and gynaecologists, believed that "the commonest abdominal tumour in women is pregnancy" (Ibid.: 159). The vocabulary surrounding pregnancy underwent simultaneous

[2] 135 cases of pregnancy detection under 20 weeks was reported in 1963 with the earliest detection being made at eight and a half weeks (Oakley 1984: 161)

changes, directed towards a highly pathological perception of birthing, as a result of an increased use of technology in this arena. Now, as Oakley (1984) suggests, the representation of women was more as objects of mechanical surveillance rather than recipients of antenatal care.

Ultrasound had been christened as the "safe non-invasive method of fetal evaluation from the earliest gestational stages" (Kaback 1976: 2 as quoted by Oakley 1984: 165). It had become a device to plot and monitor intrauterine growth and to work out the fetal skull size in relation to the bony capacity of the mother's pelvis (Oakley 1984: 161). Before the use of ultrasound, obstetricians could detect intrauterine fetal growth retardation from the presence of maternal toxaemia, but they had no guaranteed way of 'knowing'. With the ultrasound cephalometry, they could diagnose abnormal growth patterns by measuring the head. By 1968 ultrasound techniques were also being used to study the placenta through which obstetricians were now able to gather information regarding antepartum haemorrhage, amniocentesis and 'high free presenting part' prior to entering into the delivery room (Ibid.: 164). Hence, taking into account all these benefits, the use of ultrasound had become an integral part in the provision of antenatal care in the West.

Although the use of ultrasound technology in antenatal care had become routinized, it had come up against certain obstacles in its initial years. Apart from being expensive, there were questions raised regarding the levels of safety in using such technology, especially since the world of obstetrics was just recovering from the revelation of the permanent nature of damage that had been caused by the use of X-rays. Ultrasound had been tested on animal and on in vitro human cells. However, no real clinical test had been carried out to record the effects of the use of extensive ultrasound. Robin Mole, who was the then Director of the Medical Research Council's (MRC) Radiobiology Unit at Harwell, had planned to conduct a randomized controlled trial of ultrasound which would have been the first worldwide multi-centre trial of obstetric ultrasound in the early 1970s and was based on the model that had been used to study the effects of X-rays. This plan was never executed as it was eventually turned down by the MRC (Ibid.: 170). Mole's theory was that some of the possible effects of ultrasound were related to damage to

hearing and vision and a potential increase in the incidence of Down's syndrome in the children of female fetuses who received ultrasound in *utero* (Ibid.).

A trial carried out in Norway revealed that there was no overall benefit that was substantive enough to justify ultrasonic screening of all pregnancies. The study also concluded by stating that a result of this was that women who were exposed to ultrasonic screening landed up spending twice the amount of time in the hospital during their pregnancies than women who were unscreened (Bakkatieg et al. 1984 in Oakley 1984: 171). Later studies conducted over three major continents also show that routine ultrasound screening increases the risk of intrauterine growth retardation (Newnham et al. 1993 in Dumit and Davis-Floyd 1998: 3). It is also stressed by similar studies that ultrasound screenings fail to improve pregnancy outcome all the while contributing to the rising cost of prenatal care (Ewigman et al. 1993 in Dumit and Davis-Floyd 1998: 3). Apart from the above mentioned fallouts of the use of ultrasound in the provision of prenatal care, the physical discomfort of patients undergoing this examination both during and before is worth taking note of[3]. The effect of this method of monitoring the fetus on the fetus' mother has the capacity to cause distress to the fetus itself, a point that was seldom taken into account by obstetricians (Oakley 1984: 183-184).

A paper published by S. Campbell and others in the year 1982 tried to analyze some of the psychological impacts of ultrasound monitoring of the fetus. Their study revealed that pregnant women showed positive attitudes towards the scan, depending on the kind of monitoring they were exposed to and that there was no incidence of the scan causing any distress to the women (Ibid.: 185). They reached this conclusion with the help of an experiment where they divided the women into two groups. Women in the "high feedback" group were allowed to look at the ultrasound screen and see the fetus and were provided information regarding the fetal size, shape and movement, verbally. The second group was the "low feedback" group where the women were simply told that everything

[3] "From the patient's point of view the examination must be reasonably brief. A woman with a large abdominal tumour or a gravid uterus does not tolerate a prolonged examination in the *supine position, especially when the bladder may be rapidly filling as well*" (Donald 1974: 210 as quoted in Oakley 1984: 184: emphasis added)

was all right with their pregnancy. They found that the women in the first "high feedback" group felt more positively towards the scan, and that the emotional impact of it was influenced by the amount of feedback that was available to them (Ibid.). Oakley's (1984) interpretation of this is that women liked being talked to by those who provided them with antenatal care and that for the first time since its inception there was acknowledgement of the fact that ultrasound screening allowed a mother, and not just obstetricians, to see her fetus in *utero*.

Campbell's paper also went on to argue that with "high feedback" a mother's awareness of the fetus within her is enhanced and therefore, the likelihood of her complying with healthcare recommendations (such as refraining from smoking, and consuming alcohol) is raised (Ibid.). The implication of this being that 'seeing' the fetus persuades women to stick to a lifestyle as advised by the doctor. Oakley (1984) argues, "Ultrasound must, therefore, take its place in a long line of other well-used strategies for educating women to be good mothers"[4] (emphasis added). The medical community believed that it would help a woman to think of her fetus, as more of "companion aboard rather than as a parasite" and that it would help mothers to "behave concernedly towards the fetus" (Dewsbury 1980: 481 as quoted in Oakley 1984: 185). Oakley is quick to add that there has never been any evidence of any mother thinking of her fetus as a parasite and that along "with postnatal bonding, *prenatal bonding* will now in future be added to the *repertoire* of reproductive activities named and controlled by obstetricians" (Oakley 1984: 185: emphasis added). The costs of ultrasound are weighed against the 'non-medical' benefits such as bonding between parents and "fast forwarding the reality and gender of the fetus" (Dumit and Davis-Floyd 1998: 3).

Apart from using the technique of ultrasound for visualization, there were other ways in which obstetricians were trying to 'see' and 'know' the fetus. Fetoscopy was one such method, which allowed them to look at the fetus and its environment in real life colour. Even though ultrasound and the direct sampling of amniotic fluid (by inserting a needle

[4] This has been the underlying guiding principle of all the developments in the field of antenatal care in the West, a point that has been dealt with in detail in the previous chapter.

through the maternal abdominal wall) superseded this method at the level of routine features of antenatal care, fetoscopy opened up new horizons for antenatal fetal surgery (Oakley 1984: 172). Apart from these, prenatal diagnosis also includes technology such as chorionic villus sampling, percutaneous-umbilical cord sampling and other constantly evolving experimental interventions (Rapp 1998: 143).

The fetal imaging techniques and the abortion debate were intrinsically tied together in the context of the West, especially the United States. The act of seeing, it has been argued, is mediated by much more than just the eyes. The common presumption has been "that to be able to "see" the world at all is already to be making sense of it" and that there exists "a well-ordered transparent world, directly perceived and objectively perceivable" (Hartouni 1997: 13-14). Fetal imaging techniques are premised on the belief that "what we see" and "how we see" are distinctly separable. Fetal visualization techniques have succeeded in recasting the uterus as a "public space" and the embryo as a "public entity" and in the context of the abortion debate, with the state becoming a key player, a further reconfiguration of who constitutes a legal subject[5] takes place (Ibid.: 18). The fetus, is thus "personified, perceived, presented, and produced as a person who has simply been awaiting discovery" under the 'neutral' gaze of the obstetricians and sonographers. It was believed that with the help of ultrasound imaging women would be discouraged from opting for abortions, as it would allow them to realize the "essential or true nature" of the unborn child and provide them with the opportunity to bond with the fetus growing inside of them (Ibid.: 59). Yet again, the function of aiding the *social bonding* between mother and fetus, as discussed earlier, is seen to manifest itself through the abortion debate.

New reproductive technologies are displayed as a woman's private choice against the backdrop of a society driven by an ideology that emphasizes individual freedom and value neutrality (Raymond 1993: ix-x). It is this ideology that prevents the examining of technological and contractual reproduction as an institution in itself, which comes with

[5] The emergence of technology aiding the visualization of the fetus as early as at the time of 5 weeks gestation, has led to a reframing of the juridical position on the rights of women and the rights of the fetus (Hartouni 1997: 18).

its own set of biases. Since the debate on abortion and NRTs is so intrinsically tied together, those who speak out against the use of excessive technology and the medicalization of birth are "accused of making women victims" and of "denying that women are capable of choice" (Ibid.: x). The right to choose is fast converging into the right to consume. "The right to consume makes reproductive consumerism ethical" (Ibid.: xii). Raymond (1993) warns that for the concept of 'choice' to benefit women, it must not be constructed as an "absolute right"; otherwise it runs the risk of slipping into "mere market consumerism". What gets lost in the discourse on 'choice' concerning access to reproductive technologies and having "made to order" pregnancies and babies is the fact that the more the number of technological options, the less possible it is to choose options that do not involve technology" (Rothman 1985: 32 in Dumit and Davis-Floyd 1998: 2). The 'choice' of not choosing from amongst the plethora of technological diagnostic options that are offered is a 'choice' that is fast being jettisoned from the system.

Davis-Floyd suggests the One-Two Punch theory for understanding the cultural management of birth in America. First the natural rhythm of birth is broken by the several interventions made in the initial stages of labour in the form of withholding food and drinks from the women, which only further weakens them, by making women lie on their back during labour reducing oxygen and blood flow to the baby, to name a few among a host of other routine procedures that are followed within the obstetric ward. Obstetricians then expend all their energy in artificially trying to tackle the distorted results which are an outcome of the same routine procedures that are followed as soon as the woman is admitted to the hospital such as preventing her from drinking any fluids, which then needs to be administered through IVs. Drugs to speed up labour are injected through the IV alongside which drugs to relive the pain is also administered, which ironically slows down labour. This further leads to shortage of blood flow and oxygen supply to the baby who goes into distress and finally all the drama is put to an end in a desperate bout to save the child by performing a Cesarean section or by delivering it with the help of forceps (Dumit and Davis-Floyd 1998: 10). It has been argued that re-creating a natural process with the help of technology is to make it 'better'. In the case of

childbirth, "hooking a woman up to an electronic fetal monitor is better than letting her labour on her own, even if that fetal monitor is likely to give false reading (as they often do) that leads to an unnecessary Cesarean section" (Ibid.: 11).

New reproductive technologies (NRT) in the West has revolutionized the field of obstetrics, a trend that is gradually spreading to other parts of the world. There are three crucial factors providing impetus for the constantly growing and evolving field of NRTs. First is the grounding of modern obstetrics on the belief that it is capable of totally doing away with the notion of any negative outcome of pregnancy. As a result, every pregnancy is treated as a potentially dangerous one. Obstetrics came to the conclusion that no pregnancy is 'normal' except in retrospect. It has been argued that "an account of normalcy", in this context is "derived in part from an abstract female body rather than on the multiple possibilities" emerging out of "individual women's bodies" (Murphy-Lawless 1998: 8). Second, is the 'cultural' obsession with having the 'perfect' pregnancy and baby, which is a logical extension of the fact that modern day obstetrics believes it has the capability to control and manipulate every stage of pregnancy. For instance, amniocentesis has become a routinized procedure on the basis of which women decide whether to carry a pregnancy to full term or opt for an abortion (in case if the fetus is found to have congenital defects). Hence, the kind of "controllability" and "predictability" that comes with birthing in the modern set up is in direct contrast to the perceived chaos of 'natural' childbirth (Dumit and Davis-Floyd 1998: 10). The "script of infertility – the dialogue of benevolent doctors and desperate couples" provides the final impetus to the growth of NRTs (Raymond 1993: xiii). Technological reproduction has been flaunted by both medicine and the media, as the greatest hope for infertility and has been successful in suppressing certain critical questions regarding the way in which 'infertility' itself has been constructed in society[6] (Ibid.: xiii-xiv).

[6] While IVF has a success rate of 0-15 percent, other forms of technological reproduction such as surrogate contracts have a very obvious race and class bias, which is seen to benefit mostly white, middle-class, married, heterosexual couples. Apart from this, terminologies related to such contracts are often problematic where the sperm donor constructed as the 'biological father' are contrasted against the 'surrogate mother' (Raymond 1994: xiv)

Robbie Davis-Floyd (1990) in her work on birthing in America decodes the cultural symbols guiding the technological model of the reproductive body and birthing. All aspects of American life are directed by these cultural symbols, which forms the basis for the acceptance of this technological model in an unquestioning and undisputed manner. The "core values" that govern the cultural reasoning of American society "centers around science and technology" (Davis-Floyd 1990: 175). Davis-Floyd (1990) argues that society is thus confronted with the dilemma of how to convert a "powerfully feminine" and *natural* process, like childbirth, into a culturally controlled phenomenon. Her analysis of the medicalization of birthing in America tries to unravel how these dilemmas are resolved with the help of the notion of "obstetric rituals" followed in hospitals. These "obstetric rituals" integrate the "natural" and "feminine" process of birthing into the scheme of a "technological" and "patriarchal" culture, which is said to govern life in America. Routine procedures like the lithotomy position, episiotomies, fetal monitoring and even Cesarean sections are all part of the "obstetric rituals" that are followed in order to remove the "conceptual threat" posed by birth to the technological model of life (Ibid.).

In order to achieve technological control over birthing, it becomes mandatory to first construct a mechanical metaphor to make sense of the reproductive body, as has been argued by many scholars[7]. The mechanical outlook can be traced as far back as the writings of Descartes and Bacon who implied that a "conceptual separation of the mind and body" was attainable where, the body, "as a mere part of mechanical nature, could be taken apart, studied, and repaired without fear of affecting the *superior cultural essence* of man – his mind" (Ibid.: 178: emphasis added). The establishing of the "body-as-a-machine" also ensured that it was the male body which became the "prototype" of this machine. As an extension of this logic, what then becomes evident is the perception of the female reproductive body as a dysfunctional machine, which needs to be fixed by the "mechanic" and in this case, an obstetrician (Martin 1989:54). What gradually grew out of this idea, post the Industrial Revolution was that reproduction came to be seen as a

[7] For detailed accounts of the use of the machine metaphor for the body refer to the works of Carolyn Merchant, Robbie Davis-Floyd, and Emily Martin.

form of production thereby making the menstruating or menopausal female body a failed productive unit (Ibid.:57). Women giving birth in the hospital are treated like "products on a factory conveyor belt" (Kitzinger 2006: 3). The production metaphor reduces the woman to a mere "labourer" whose "machine" (the uterus) produces the final "product", the baby (Martin 1987: 57).

Technology is seen to mediate the transition from birth being set up as a "natural" phenomenon to becoming a culturally controlled one, all the while keeping in sync with the mechanical metaphor. Davis-Floyd (1990) has argued that this mediation is accomplished by the performance of certain "obstetrical rituals" that help contain the chaos and unpredictability that any "natural" phenomenon brings with it. She has used such an analysis to unpack some of the routine procedures that are performed from the time a woman in labour enters the hospital up until the time she leaves it. The symbolic stripping of "her individuality, her autonomy and her sexuality" is achieved by separating the birthing woman from her husband, making her put on a disinfected hospital gown, shaving or clipping her pubic area right up till she is "ritually cleansed" with an enema (Davis-Floyd 1990: 180). These 'rituals' are "specifically designed to eliminate the inconsistency between the birth process and our technological belief system", argues Davis-Floyd. Only after going through a host of unnecessary interventions such as being made to lie in the lithotomy position, being administered the pitocin drug to speed up labour, the administering of the subsequent epidural, being hooked up to fetal monitors, the performance of the episiotomy and finally in a large number of cases the performance of the Cesarean section to get the baby out, is the "technological anointing" considered complete and the woman is finally "dubbed" as the "new mother" (Ibid.).

In the next section one such specific 'ritual' that is followed by obstetricians will be discussed. According to the above analysis, the IV, which is the 'technological umbilical cord' signifying the dependence of the woman on the hospital, has not only been routinized but also ritualized by modern medical practitioners (Ibid.). Similarly, practices regarding the cutting of the umbilical cord which attaches the baby to the mother and the delivery of the placenta, the organ that nourishes the baby in the womb of the mother for

nine months, within the hospital set up, are equally ritualized. The following segment will aim at unraveling some of these practices in order to construct the model of birthing that is in practice today in the West and will be contrasted with an alternative model provided by the traditional system of birthing in the next chapter.

III

Oakley (1984) argues that the use of "marine metaphors" of relating to the womb and "excursions into the fetal marine environment with fetoscopy and amniocentesis have provided us over the past 20 years with a whole new way of describing pregnancy". One such metaphor involving the fetus, umbilical cord and placenta is that of a free-floating astronaut attached to the mother spaceship with the help of the supply line (Oakley 1984: 175). What becomes implied from the literature of that period is that although the spaceship may consider itself to be important to the astronaut, in reality it is the astronauts who have the upper hand (Ibid.). Consequently, the fetus comes to be perceived as "an egoist, and by no means an endearing and helpless little dependent" on his mother (Hytten 1976: 36 as quoted in Oakley 1984: 175).

The relation of the placenta to the mother on the one hand, and to the fetus on the other, has been a phenomenon that has perplexed doctors for centuries (Ibid.). The understanding of the importance of the umbilical cord can be traced as far back as the Old Testament, which talks of two Hebrew midwives, Shiphrah and Puah, who were ordered by the Pharaoh to cut the umbilical cord of the male offspring of Hebrews in such a way so as to kill them (Velpeau 1852: 25). Right through antiquity and the middle ages up until recent times, practices surrounding the umbilical cord and placenta have occupied centre stage in obstetrics. One of the latest controversies in the practice of obstetrics today is also woven around issues of cord cutting and delivery of the placenta. The "third stage of labour" which begins after the delivery of the child and lasts all the way till the placenta has been expelled has been a topic of much debate in the discipline.

This, however, is not purely a modern day preoccupation as accoucheurs from ancient times have been grappling with similar questions.

Post-partum haemorrhage was considered to be one of the leading factors contributing to the large number of maternal deaths that was inflicting post-Industrial Revolution society. Proof of this can be found in the innumerable medical writings published in the first half of the nineteenth century that instructs the medical practitioner to not think that his job was done with the mere delivering of the child. His task was complete only once the placenta had been thoroughly expelled out of the body. Retention of the placenta in the uterus of the mother after the child has been delivered is one of the main causes leading to post partum haemorrhage. Hence, texts on midwifery and obstetrics devoted ample amounts of energy cautioning practitioners against believing that the 'dangers' and 'obstacles' of childbirth had been circumvented if a healthy child had been delivered. "The true danger of parturition," writes Gunning S. Bedford (1864), a Professor of Obstetrics and Clinical Midwifery at the University of New York, "in an ordinary labour, commences with the birth of the child, and is more or less connected with the delivery of the placenta". It was the maneuvering of this stage in the birthing process that put a practitioner's acumen to test.

Although the chief concern of this segment is not the issue of post-partum haemorrhage, it becomes important to understand the reasoning on the basis of which practices regarding cord cutting and the delivery of the placenta came to be institutionalized within the discipline of obstetrics. In order to achieve this, an analysis of nineteenth century medical texts is taken up, highlighting not only the preoccupation of nineteenth century obstetricians with issues concerning post-partum haemorrhage but in the process also bring out key discursive elements of the nineteenth century in the West on the issues of cord cutting and management of the placenta.

The placenta, writes Alf. A. L. M. Velpeau (1852), named by Fallopius is shaped like a "flattened cake" and is that part of the ovum which is in immediate contact with the organs of the mother. It is a circular substance that is about six or seven inches in

diameter with an inch thickness at the centre but thin along the circumference. A deciduous mass composed almost entirely of blood vessels, the placenta is divided into two portions, the maternal, which is connected to the uterus, and the fetal, which is covered by two membranes the chorion and the amnios (Bedford 1864: 308). There are two circulations in the placenta, one on the maternal and the other on the fetal surface. While the former is carried on by the *utero*-placental vessels, the latter is carried on by the vessels in the umbilical cord, namely two arteries and one vein (Ibid.). The fetus, in *utero* apart from depending on the placenta for nourishment also depends on it for other important bodily functions. The umbilical cord may be fixed to any part of the placenta, or even to the membranes at a distance from it. Usually the cord is implanted nearer to the centre than the circumference and from "this point the vessels radiate, and ramify on the placenta, gradually dipping into its substance" (Burns 1809: 228).

The placenta and the membranes, after the birth of the child, are referred to as the 'after-birth' and their expulsion is called 'deliverance' (Velpeau 1852: 571). Like childbirth, the detachment of the placenta from the walls of the uterus to which it is attached, is a "natural function". But, medical practitioners from the eighteen century itself, had started publishing writings on the 'difficulties' and 'dangers' of delivering the 'after-birth' and thereby constructing a parallel discourse which provided an impetus to the increase of invasive methods in dealing with the placenta, post the birth of the child. While there was an acknowledgement of the fact that the expulsion of the placenta was a "natural" process, it came to be believed that the process could be completed without human intervention only in a few exceptional cases. Hence, the established rule within the medical circuit of nineteen century was that the placenta and the "third stage of labour" needed to be 'managed' by the attending practitioner. What resulted from such a conceptualization was that the "management of the placenta" came to be divided into two categories namely either 'spontaneous'/'simple' delivery or 'artificial'/'complex' (Ibid.). The former has sometimes also been referred to as the "unassisted delivery of the placenta" (Dewees 1853: 167). However, what becomes apparent on preliminary review of nineteenth century obstetric texts is that neither of the two categories, in actuality

allows for the completion of the delivery (of the placenta) without any sort of intervention.

One of the main factors guiding the trend of pathologization of the placenta was its relation to haemorrhage. Although there were other causes for such an occurrence, the retention of the placenta within the uterus was seen as being a major factor leading to the death of women. It was believed that if the womb did not contract once the child had been delivered, indicating that the expulsion of the placenta was imminent, then there would "necessarily be haemorrhage" (Bedford 1864: 309). 'Flooding', a term repeatedly used to refer to haemorrhage, can either be external or internal. The former occurs when the blood flows through the vagina while the latter occurs when there is a coagulum of blood or the "detached placenta resting at the mouth of the uterus" blocking its escape. Both these arise for the same reason, namely, from the "want of uterine contraction" (Ibid.: 313). Bedford claims that the same remedies can tackle both kinds of haemorrhage by making the uterus contract and diminishing the circulation of blood in the organ itself. However, there was full knowledge of the fact that once a woman started haemorrhaging, it could not be stopped by merely delivering the placenta. The placenta was never perceived as the bleeding surface but the post child birth haemorrhage was propelled by it. Hence, removing every minute particle of the placenta from inside used to consume considerable amounts of the practitioner's time and attention.

The separation of the placenta from the womb is accomplished through contractions of the uterus. This is accompanied by pain, similar to labour pains and some discharge of blood. It is with the progression of labour that the placenta detaches itself from the walls of the uterus and in most cases it begins to come away in eight of ten minutes, but might also take up to twenty minutes (Meigs 1856: 337). In the natural or simple delivery of the 'after-birth', once the placenta detaches itself, it presses upon the "os uteri" and the womb is "irritated" by its presence which leads it to constrict and contract till the placenta is dispelled into the vagina (Velpeau 1852: 571). When it is in the vagina it gives a feeling of "uneasiness" and "bearing down" which further continues to "solicit" contractions of the womb and facilitates the movement of the abdominal muscles, which

in turn expels the placenta, much in the same way as the expulsion of the fetus (Ibid. 571-572).

It was also noted by eminent medical practitioners of the time that in many cases the 'labour' of delivering the placenta, both on the part of the woman as well as the accoucheur, extended over long hours. Velpeau (1852), in the section titled "Attentions Required in the Simple Delivery of the Placenta" of his book on midwifery, states that "although the organism generally suffices to finish the expulsion of the after-birth when it has reached the excavation" it might take an indefinite period to complete the actual process. It is to counter this "tedious slowness" and "to relieve the woman of her fatigue and uneasiness of mind, that a natural or simple case of delivery of the placenta is scarcely ever wholly abandoned to the efforts of nature" (emphasis added). Other practitioners of the time were even unwilling to wait half an hour for the expulsion and continued to devote their attention to the placenta almost immediately after the child was delivered.

In his book, Velpeau (1852) recounts that he would wait until the labour pains started before he proceeded to act with regard to the placenta, but after a few incidents within a span of six months where he was "obliged" to wait for long hours for the expulsion of the placenta, in the case of one woman he had to wait for forty-eight hours before he could even "introduce a hand in search of the placenta", he restructured his mode of operation. From then on he started concentrating on 'delivering' the placenta as soon as the uterus contracted and became hard, even if the woman had not started labour. From this it becomes clear that apart for the fear of haemorrhage, there was another motivation for the speedy expulsion of the placenta. This came in the form of the impending need of the practitioner to be relieved of his duties at the earliest, instead of waiting long hours for nature to take its own course. The 'assembly line' approach to birthing within the modern day hospital set up, alluded to in the earlier section, had already started taking shape by this time.

Numerous methods were put in place in order to ensure the complete expulsion of the placenta by the nineteenth century, which ranged from applying friction upon the abdomen (Rigby 1851; Meigs 1856: 339; Bedford 1864) to using hooks and forceps (Meigs 1856: 251) to drag out the placenta in difficult cases. The methods of extraction were only partially less intrusive in the case of a 'natural' delivery when compared with methods involved in 'complicated' deliveries. In both cases practitioners relied on the insertion of either their hands or instruments into the womb of the woman in order to facilitate the expulsion of the placenta. The method most commonly cited by practitioners whether in the case of a 'simple' or 'complicated' delivery was that of using the umbilical cord to gently pull down the placenta, only once it was ascertained, by 'introducing' the hand to check for the location of the placenta, that it had separated itself from the uterine walls (Burns 1809: 560-562; Blundell 1834: 259-260; Rigby 1851; Velpeau 1852: 575-577; Meigs 1856: 339-342; Bedford 1864: 310-311). All practitioners, however, cautioned against the dangers associated with this method. If not carried out carefully, it could result in inversion of the uterus and haemorrhage, apart from making the procedure itself painful.

Dewees (1853) was one of the practitioners of the time who expressedly spoke out against the use of intrusive methods to quicken the expulsion of the placenta. He argued that if the placenta was not expelled "spontaneously in due time", it was appropriate for the accoucheur to provide every bit of assistance to aid its exit "without the introduction of the hand". Though there was much debate regarding the 'right time' for the expulsion of the placenta amongst leading practitioners, according to him the indication of the 'right time' should come from "the condition of the uterus itself, and not from the number of minutes or hours that have elapsed" (Dewees 1853: 375). He goes on to state that he has "always objected to making "time" the criterion for action in midwifery", an idea that was sweeping over the discipline of obstetrics at the time. Practitioners like De la Motte, Deventer and Peu and others were of the opinion that even a period of thirty minutes post the delivery of the child could turn out to be too long a wait, as far as the expulsion of the placenta was concerned. They believed that if one did not act at once, the orifice got closed and may have resulted in the retention of the placenta, which gives

rise to further unfortunate events that may have severe consequences (Velpeau 1852: 572). These were not however the only opinions doing the rounds in the field. Practitioners such as Kerckring, Ruysch and Hamilton believed that the "introduction of the hand was not only a useless but also an "extremely dangerous" procedure that should be resorted to in cases where there was an urgent necessity for it (Ibid.).

One method that was employed by practitioners form the years of antiquity was the delaying of cutting of the umbilical cord till the placenta had been expelled. Hippocrates, the father of modern medicine, would make use of the weight of the fetus to detach the placenta and bring out the after-birth. If the placenta was slow in detaching itself the child would be placed on a pile of wool or on a goatskin with small holes in it. With the gradual subsidence of the skin or the pile of wool the weight of the child would act on the placenta and without almost any violence, it would detach itself (Velpeau 1852: 607). Mauriceau and Dionis, according to Velpeau (1852), must have also adopted a similar method of waiting to cut the cord till the delivery of the after-birth as they advised that the after-birth and the fetus should be taken near fire before the cutting of the cord. Velpeau (1852) also reflects on the works of Keutsner, who believed that the placenta must be expelled before the division of the cord and that no regrettable incident had ever taken place while following this method with eighteen hundred cases, while he had lost sixty-nine women out of four hundred and twenty-nine when he followed the method of pulling on the cord to deliver the placenta.

Like the debate regarding the 'right time' for the expulsion of the placenta, the debate on the 'right time' for the severing of the umbilical cord was also not an easily resolvable one. The early modern world of obstetrics was divided on the issue of cord cutting. The umbilical cord is an essential part of the ovum, connecting the fetus to its placenta, writes John Burns (1809). The human umbilical cord consists of two arteries and one vein. The umbilical vessels run in a spiral direction, within the covering of the cord, and the twist is from right to left (Burns 1809: 234). The cord at full time varies in length, from six inches to four feet, but its usual length is around two feet.

After the delivery, as soon as the child was found to have established its respiration, steps were taken to sever it from the "mother's couch" (Meigs 1856: 703). When a child is born, states Burns (1809), the first thing that needed to be established by the practitioner was whether if it were able to breathe by itself. With this established, only then could the accoucheur move forward with the proceedings of severing the umbilical cord. However, as mentioned above, there was no real consensus as to what was the best time to cut the cord within the nineteenth century practice of obstetrics. Many practitioners like Deventer (1733-1815) argued that the placenta must necessarily be expelled before the severing of the cord. Guillemeau, physician to Henry IV, writes Velpeau (1852), must have followed a similar practice as it was noted that he recommended taking the child near the fire and "applying" the placenta on its belly in order to revive it[8]. In the time of Aristotle and Fournier, midwives would force the blood in the cord into the belly of the fetus before they severed it, which they thought restored strength and vigor to weak babies (Velpeau 1852: 610)[9]. Also it may be noted that the decision of when to sever the umbilical cord was reliant on the condition of the uterus and the indications it gave regarding the delivery of the after-birth. For instance, Velpeau (1852) mentioned that Dionis would not sever the umbilical cord immediately when the after-birth required only gentle pulling, but would do the opposite if he realized that he would have to "introduce the hand" in search of the placenta. Since the time of Levret (1703-1780), the severing of the umbilical cord came to be performed as soon as the child had been "passed through the vulva" and the belief that it was no longer necessary to wait for the delivery of the placenta before cutting the cord had come to be established as a general rule (Velpeau 1852: 609).

There existed considerable disagreement in the field regarding whether there was any need to delay the division of the cord so as to allow for the pulsations to cease. While practitioners such as Velpeau (1852) did not find it necessary to wait for the cessation of pulsations, others like Denman advocated that the cord must only be divided once the

[8] A practice that has been witnessed in many parts of the world, especially in India as will be discussed in the next chapter.

[9] The practice of milking the cord is still practiced by birth workers in India, when a baby is seen to be weak or having difficulty breathing.

pulsations in the cord have stopped (Burns 1809: 625). Velpeau (1852) suggested that once the respiration is established the placental circulation becomes completely useless, Burns (1809) warned that if the respiration flagged at some point soon after birth, the placenta acted as an auxiliary if the connection still existed between it and the child through the umbilical cord. The pulsations eventually stop with the detachment of the placenta from the uterine wall, but until then it continues to pulsate. Hence, no ligature was to be applied till the child breathed "perfectly and regularly" in the opinion of Burns (1809). Erasmus Darwin writing in 1801 stated, "another thing very injurious to the child, is the tying and cutting of the navel string too soon; which should always be left till the child has not only repeatedly breathed but till all pulsation in the cord ceases. As otherwise the child is much weaker than it ought to be, a portion of the blood being left in the placenta, which ought to have been in the child."

Apart from this, there was also controversy regarding how many ligatures were to be applied before the cutting of the cord. The common practice till then had been to apply two ligatures, but increasingly practitioners began to realize the futility of this and recommended the tying of only one ligature. There were others like Deleurye, who believed that there was no requirement for a ligature at all while severing the cord (Velpeau 1852: 610-611). Bedford (1864) advocated the abandonment of the usual practice which, up until then, had been to apply two ligatures before severing of the cord, one nearer to the placental end while the other was to be tied nearer to the child's end leaving at least a gap of two fingers' width from the belly. Meigs (1856), on the other hand, stated that it was also essential to check the condition of the uterus before deciding how many ligatures needed to be applied. If the uterus was found to be still very large, then it was considered wiser to apply two ligatures instead of one (Meigs 1856: 704). He argued that this allowed the placenta to retain part of the blood which made it fuller thereby prompting its speedy descent through the "*utero*-placental superficies" as compared to the descent of a flaccid placenta.

From the medical writings of nineteenth century on the topic of severing of the umbilical cord and the delivery of the placenta, it becomes apparent that there was very little

consensus regarding the basic practices involved in the "third stage of labour". In today's context, with the passage of over 150 years, a number of practices prevalent then that ensured a diminished intervention of the practitioner in this stage of labour have been completely lost without a trace. The threat of post-partum haemorrhage dictates the practices within this stage of labour to a far greater extent today than in the nineteenth century. As mentioned in the previous segment of this chapter, contemporary obstetric practices, in its bid to reduce the number of cases of post-partum haemorrhage, lands up treating every woman as being at risk of it. 'Normalcy', thus, becomes a matter relegated to the realm of retrospection.

Post-partum haemorrhage (PPH) is still considered to be a major factor for high maternal mortality rates in the developing world. It embodies the dominant narrative of "safe pregnancy" campaigns led by the World Health Organization (WHO), which has been advocating the "active management of the third stage of labour" in the developing nations as a strategy to combat high maternal mortality rates. The "third stage of labour" today is not only 'managed', like in nineteenth century, but must necessarily be vigorously and 'actively' managed.

Post-partum haemorrhage, as defined by the WHO, is referred to vaginal bleeding in excess of 500ml post child delivery. The World Health Report of 2005 estimates that 25% of all maternal deaths are caused by severe haemorrhage. The leading cause of post-partum haemorrhage, as laid down by the WHO, is the failure of the uterus to contract adequately so as to prevent bleeding, in keeping with the nineteenth century understanding. The strategy devised to combat haemorrhage of this sort has been termed as the "active management of the third stage of labour". "Active management" has been estimated to reduce the risk of post-partum haemorrhage by over 60% and "therefore should be offered by all skilled birth attendants at every birth" (WHO 2006).

"Active management" entails the administering of the drug known as oxytocin within one minute of the delivery of the child. Once the abdomen has been palpated to rule out the possibility of any additional baby, 10 units of oxytocin must be given to the woman

intramuscularly (Ibid.). Oxytocin has been preferred over other *utero*tonics as it is not only effective within 2-3 minutes of administering it, but it is a more stable drug to store than ergometrine and can be offered more universally to women. It is the use of oxytocin that speeds up the delivery of the placenta by causing uterine contractions which might take several hours to commence if things were left purely to nature. The placenta is delivered by the method of applying controlled cord traction. The cord is clamped close to the perineum with the help of sponge forceps, just before the cord traction is performed. Within 2-3 minutes, the woman experiences a strong uterine contraction caused by the oxytocin during which slight tension is maintained on the cord by the attendant. One hand is to be placed just above the woman's pubic bone to stabilize the uterus by applying counter traction during controlled cord traction. This must be done in order to avoid the inversion of the uterus. At the time when the uterus becomes rounded or the cord is seen to have lengthened, the cord should gently be pulled downwards to ensure the placenta is delivered. It has been instructed that one must not wait for a gush of blood before applying the traction on the cord (Ibid.). Counter traction should be continually applied o the uterus through this process.

In the event that the placenta does not descend a period of 30-40 seconds of controlled cord traction and there are no signs of placental separation, one must not continue to pull on the cord. The cord must be gently held till another uterine contraction commences, at which point the controlled cord traction must be repeated. However, the cord must never be pulled on without pushing the uterus up as otherwise there could be fatal consequences. Once the placenta has been detached, it must be held in both hands and turned until the membranes are twisted so that there are none of it is left behind in the uterus. Slowly, the placenta must be pulled to complete the delivery (Ibid.).

According to "The Care of the Umbilical Cord: A Review of Evidence" published by the WHO as part of their program on "Maternal and Newborn Health/Safe Motherhood", the "active management of the third stage of labour" necessarily implies an immediate severing of the umbilical cord after birth. While delayed cord clamping till the pulsations have stopped is often associated with traditional births, early cord clamping has come to

be identified as the routine practice in institutional births. The time of cord clamping has been seen to have effects on both the mother and the infant. A review of "active" versus "expectant" management of the third stage of labour by the Prendiville, Elbourne and McDonald, in 2007, on behalf of WHO, points clearly to the fact that though "active management" may reduce the incidence of post-partum haemorrhage, its increases the risk of unpleasant side effects that range from maternal nausea and vomiting to hypertension and raised blood pressure levels. No advantages or disadvantages were apparent for the infant. Based on this review, the authors of it recommended that "active management" should be the routine management of choice for women who have had vaginal deliveries. This is vigorously suggested by the authors, though they themselves admit in their report that there is no consensus among clinicians as to which is the best way to prevent port-partum haemorrhage.

The "active management of the third stage" involves interventions of three basic kinds, namely, the administering of prophylactic oxytocic, early cord clamping and the application of controlled cord traction to deliver the placenta. It is with reference to the second intervention of early cord clamping, that the above mentioned review of 2007 might be found to present contradictory information when seen in tandem with another document also published by the WHO. In the review of evidence on the "Care of the Umbilical Cord" it has been stated that placental transfusion associated with delayed cord clamping provides additional iron to the infant's reserves and may reduce frequency of iron-deficiency anaemia in infancy. It also states that "this is of particular significance in developing countries where iron deficiency is common". A major study involving more than 1,900 newborns was conducted by Eileen Hutton, Assistant Dean of Midwifery at McMaster University in Hamilton, Canada, that was published in Journal of American Medical Association, proved that delaying cord clamping for two minutes reduced the risk of anemia by half and low iron levels in the blood by a third (Johnston 2007). In 1997, Camila Chaparro and colleagues also concluded that early cord clamping resulted in a decrease in the iron stores of infants during the first 6 months of life (Diaz-Rossello 2006) Yet, the "active management of the third stage of labour", which insists on early cord clamping, is zealously advocated in the same developing countries suffering from

high rates of infant and adult anaemia, as opposed to the "expectant management" which relies on gravity and nipple stimulation for the expulsion of the placenta and may be far more suited for this context. In the same document it is also mentioned that although prophylactic oxytocin is effective in reducing the risk of post-partum haemorrhage, doubts still remain regarding its combination with early cord clamping and controlled cord traction. The routinization of the use of "active management" in healthy low-risk women is also a point of contention, according to this WHO manual.

Apart form increasing the infant's iron reserve content, delayed cord clamping has been seen to have other benefits as well. According to the same review on the "Care of the Umbilical Cord" a number of observational studies have proved that delayed cord clamping resulted in a shift of blood form the placenta to the infant. The volume transfused varied between 20% and 50% of the neonatal blood volume, depending on when the cord is clamped and at what level is held prior to the clamping. In instances where the neonates were placed on the mother's abdomen or the bed where she lay and the cord was clamped only once it has stopped pulsating, it was seen that blood volumes of these babies were 32% higher than those whose cords were clamped immediately after birth. Two randomized controlled studies, writes Cockburn (1997), have been performed on the effects of delayed cord clamping in vaginally born infants. These studies have showed an increase in hematocrit value after delayed cord clamping. Kinmond and colleagues also reported reduced red cell transfusion requirements and decreased oxygen dependence in the infants with delayed cord clamping (Cockburn 1997: 66). According to the manual on the "Care of the Umbilical Cord", the positive physiological consequences of delayed cord clamping in vaginally born preterm infants has been demonstrated by a trial that revealed preterm infant who were held 20cms below the introitus for 30 seconds before the cord was clamped required fewer transfusions for anaemia and fewer high inspired oxygen concentrations as compared to preterm infants whose cords had been clamped within 10 seconds.

A news piece titled "Cord Clamping Dangers to Baby" written by Lucy Johnston, Health Editor of the Sunday Express, was published on 16th December, 2007. The article

documented some of the main findings and arguments against the immediate severing of the umbilical cord, claiming that experiments have revealed such a practice to lead to autism on many occasions due to deprivation of oxygen to the infant. Early cord clamping, it has been argued, can lead to brain haemorrhage, breathing problems, iron deficiencies and mental impairment in feeble infants. The article quotes David Hutchon, consulting obstetrician at Darlington Memorial Hospital, who calls the early cutting of the umbilical cord a "criminal" offence on part of obstetricians. He says that obstetricians are likely to cut the cord much earlier than midwives, which could possibly explain the why the incidence of autism is higher among infants delivered by obstetricians than those delivered by midwives. Experts, according to this article, claim that at least 3 minutes should elapse to allow the blood to flow from the placenta into the infant as blood and oxygen supplies in the baby are rapidly decreasing during the minutes after birth. Infants need an increased blood volume to till their lungs and the rest of their organs that are coming into use. This is especially the case for weak and feeble babies.

Concern has been expressed over the increased blood volume and red blood cell volume, a result of delayed cord clamping, which could lead to heart and respiratory difficulties in the infant. According to the review of evidence on "Care of the Umbilical Cord" brought out by the WHO, these effects of delayed cord clamping have never been proved and on the contrary, research points to the fact that there is a self-regulatory mechanism in infants which limits the extent of placental transfusion. It has also been proved that the circulatory system of the newborn is capable of rapid adjustment to an increase in blood volume and viscosity by increased fluid extravasations and dilation of blood vessels. There have been studies claiming that delayed cord clamping may also have adverse effects for infants with perinatal complications. For instance, a study found that blood volume in asphyxiated newborns was high in spite of immediate cord clamping, possibly due to prepartum redistribution of blood between the fetus and the placenta. It was said that delaying the clamping of the cord in these babies may cause hypervolaemia and cardio-respiratory complications (World Health Organization: 11). However this too, has not been proved till date.

Jose Luis Diaz-Rossello (2006) paper in The Lancet clearly states that although there is exists no evidence of the benefits of early cord clamping, it is a common practice in modern obstetrics. The author however, brings to light another aspect of the reasoning behind the persistence of such a practice in today's context. Cord blood banking has become the newest craze in the world of obstetrics. The phenomenon of cord blood banking puts further pressure to ensure sufficiently large volume of cord blood is collected. Since quality standards for cord blood collection are based on ensuring largest volume of neonatal blood is retained in the placenta and the umbilical cord, the clamping of the cord needs to take place as early and as close to the neonate as possible (Diaz-Rossello 2006). If one waits for the blood from the placenta to drain into the infant's body, the placenta becomes flaccid and pulseless. The residual blood that is left after this has occurred is then not sufficient for banking purposes. Hence, again there is indication of the fact that the motivation behind the early clamping of the cord and the "active management of the placenta" might be of spurious origins.

The impact of early cord clamping on infants, like the reduction of the extent of blood transfusion to the baby and the resultant significantly lower haematocrit and haemoglobin levels has been well established in the discipline (Ibid.: 12). Dr. Weeks, senior lecturer in Obstetrics at the University of Liverpool and practicing obstetrician at Liverpool Women's Hospital, states that "there is evidence to show it [immediate clamping] can damage a baby but none to show it can benefit" (as quoted in Johnston 2007). The WHO manual on "Care of the Umbilical Cord" states that there is "no clear evidence to favour one practice over the other. Delaying cord clamping, once the pulsations stop, is the physiological way of treating the cord and is not associated with adverse effects, at least in normal deliveries. Early cord clamping conflicts with traditional beliefs and is an intervention that needs justification. If controlled cord traction after oxytocin administration is practised, early cord clamping is mandatory". However, it ends by stating that further research is needed to ascertain the effects of the timing of cord clamping to reach any conclusive result. Velpeau (1852) states that " however, it must be confessed that, if the child present nothing peculiar as to its condition, one of these modes of proceeding is scarcely preferable to the other, and that each practitioner is at

liberty to adopt the one that pleases him best[10], without its having any influence upon the result of his practice". Not much has been accomplished between the time that Velpeau was writing, in the mid-nineteenth century and Dr. Weeks' comment in the 21st century with regard to practices of cutting of the umbilical cord. For a field of science that asserts its superiority on the basis of the kind advances it makes, some of the basic questions related to the practices of obstetrics still remain unanswered for over 150 years. Nevertheless, even with the lack of substantial proof regarding the pre-eminence of one method over the other, immediate cord clamping has not only been institutionalized within the hospital, but is being advocated all over the developing world as the 'better' method.

The "active management of the third stage of labour" which begins after the delivery of the child and ends with the dispelling of the placenta, has been perceived as being one of the most intrusive methods used during the provision of obstetric care, as perceived by many scholars. Louise Silverton's work referred to by Jo Murphy-Lawless (1998) states that risk classification has become an intrinsic part of obstetric practice whose effects stretch back into antenatal care. There is a tendency to speed up the process of birthing for the very reason that birth cannot be perceived as 'normal' until it is over and since till then it is seen as potentially pathological, obstetricians find it more comforting to get over with the potential unpleasantness that may arise from it (Murphy-Lawless 1997: 200). Therefore, "staging labour, controlling it, has long been a concern for the interventionists, with attention being given to the different phases of labour, according to different rationales which themselves would change from practitioner to practitioner" (Ibid.).

The question that now arises is that on what grounds does a particular practice gain over another and how does it come to dominate the discipline of obstetrics? What are the different factors motivating the endurance of certain practices while others perish and

[10] There was no recognition of the fact that the woman who has just given birth might want to have a say in such matters. There was a complete lack of agency for the woman in such decision making situations, nor was there any space given for her preferences. Hence by this time, women had been moved to the periphery of the debates that took place regarding birthing practices, and they were converted into mere recipients of medical care at the mercy of the doctor.

disappear without a trace? As has been discussed in this segment of the chapter, both medical as well as non-medical reasons can be given credit for such an occurrence. Convenience of the medical practitioners, new procedures that emerge within the practice itself and provide further impetus to one method of doing things over another, such as cord blood banking, different stakes in the market economy, politics, religion so on and so forth, all come together and exercise their influence over this field, which still puts a defence up for itself by declaring superiority based on 'scientificity', a claim that has been amply debunked over course of this section.

With the biomedical model in place, the stage is now set for the analysis of the alternative practices presented by traditional systems of medicine, found in different parts of India. In the next chapter, not only will the individual practices revolving around umbilical cord care and birth of the placenta be brought to life but the whole alternative cosmology within which birth unfolds will discussed. These systems, unlike biomedicine, do not claim to be operating in an isolated realm, which is unaffected by the larger values, beliefs and customs of the community. On the other hand, in fact, it is precisely the opposite that accounts for its prevalence. Therapeutic practices are so intricately woven into the cultural world and vice versa, that any kind of intervention conflicting with the traditional practices requires lengthy justification, according to the World Health Organization. The next chapter will try and make a case for these traditional practices which are currently facing the onslaught of the 'modernization' project that has made "Safe Pregnancy" one of its mantras.

Chapter Three

An Alternate Epistemology:

Conceptions of the Body, Umbilical Cord and the Placenta

Having discussed the cutting of the umbilical cord and the treatment of the placenta within the biomedical system in the last chapter, it is now time to shift focus to a varied number of practices revolving around the same phenomenon within the indigenous therapeutic systems that are found across the different states of India. The first section will provide a general overview of the way in which pregnancy and childbirth are conceived by a sizeable number of women here. This will help in creating a backdrop against which a discussion of the central theme, namely, cord cutting and delivery of the placenta, can be taken up and contrasted with the 'modern' conceptualization of the same. Even though the central focus will remain on the practices that are directly related to cord cutting and the placenta, a broader analysis of postpartum work, rituals and routines will also be looked at through the course of this chapter.

Birth related knowledge and work is attributed to a particular category of women (and sometimes even men) who have come to be known as *dais*[1]. The *dai* tradition of India is

[1]The terminology of '*dai*' has been problematized by many scholars. The term 'dai' is most widely used in northern India and is said to be of Arabic origins. During the late nineteenth century, a number of categories of healers were clubbed together under the head of the 'dai' (Van Hollen 2003: 44). Pinto corroborates this argument further by providing instances from Sitapur in the state of Uttar Pradesh, where there is no universal category of the '*dai*' with relation to the division of labour. While assistance during birthing is ensured by elderly relatives on most occasions, the act of cutting the cord and burying the placenta is carried out by the '*dhanuk*'. The postpartum work is performed by a third category of women who belong to the barber caste. Therefore, which of these women would fall under the category of the '*dai*' is a complicated question to answer. Pinto also claims that all these different birth worker are referred to my their caste names or kinship terms (Pinto 2006: 220). It because of this I have refrained from using a one specific term to refer to birth workers, and in different sections I have referred to them differently, to prove that there is a lack of homogeneity in this category.

popularly seen as an emblem of all things traditional. Whether one is arguing in favour or against her recurring presence in this arena, the *dai* is most often portrayed as a non-dynamic, stagnant figure (Pinto 2006: 209) who works with an understanding of the human body that is far from any sophisticated conception on which 'scientific' theories are said to be based. With infant and maternal mortality rates becoming one of the chief markers of a country's developmental achievements, *dais* have ever since been occupying centre stage in all debates on this issue. They have come to be perceived either in an instrumental manner whereby they are seen to act as catalysts in the modernization process or in other instances seen as threats or obstacles to it. The modernizing project has another way of approaching the scene. A majority of the *dais* belong to some of the most economically, socially and culturally deprived sections of society. They either come under the Untouchable castes or other communities which fall outside of the Varna system. As a result, alleviation of the current conditions gains primary importance in all discourses concerning childbirth in India, not only from the perspective of the women giving birth and their new born infants but also as far as their traditional caregivers are concerned. The cutting of the cord and birth of the placenta is a critical phase in the process of childbirth not simply for medical reasons but also as it is considered the most ritually polluting phase. The last section of this chapter is geared to presenting a detailed analysis of the notions of purity and pollution, which directly feed into and affect birthing work. While addressing some of the old questions, new questions get raised and what emerges in the process is a reconstruction of the therapeutic, ritual and psychological space of birthing.

I

In her analysis of fertility behaviour in Rajasthan, Patel (1994) claims that the choices exercised by couples are deeply embedded in socio-economic conditions as well as specific institutional mechanisms, namely customs, rituals, ceremonies and other collectively held beliefs. While looking at birthing within a 'traditional' set up, the same line of argumentation can be used to understand a completely alternative construction of

childbirth itself and the kind of choices that are exercised by women on the basis of such a construction. Patel uses the framework of structuration as provided by Giddens to argue that fertility behaviour (which includes attitude towards and practices of childbirth) "is to be located neither in the experience of the individual actor nor in the existence of any form of societal totality, but in social practices occurring routinely. The various social practices associated with fertility are recursive—repetitive activities undertaken in a like manner day after day" (Patel 1994: 4). She further refers to what Giddens calls 'mutual knowledge' which is what endows the routinized behaviour of individuals with a "taken-for-granted" character. This knowledge may not be verbally expressed or "accessible in discursive terms" (Ibid.: 4-5). However, it tacitly informs the *dai*ly activities and choices of individuals with regard to only their fertility behaviour but also in their dealings relating to other aspects of life. Excavating these discursive and non-discursive aspects of the 'mutual knowledge' pertaining to childbirth practices, with special reference to the umbilical cord and placenta is the predominant concern of this chapter. However, before entering that specific terrain, it might be worthwhile to look at how childbirth is culturally and socially organized within a 'traditional' context, as the social construction of a particular phase within the process can make sense only once it is seen as a part of the much larger cosmology. This section is dedicated towards that end.

Childbearing and rearing is seldom the sole responsibility of the couple (Ibid.: 6). With the mother at the centre, a support system is built up where the entire household, relatives and neighbours have a crucial role to play in childbearing and rearing and in the socialization process as well. Patel's writing on fertility related behaviour patterns in the small village of Mogra, Rajasthan addresses some of these important areas. Throughout her work, she stresses the subordination of the identity of the couple in matters of childbirth while bringing out the social and cultural nature of such an occurrence. The entire household is tied together in a network of reciprocity where mutual help and sharing takes place in order to organize childbirth (Ibid.: 106). The institutionalized practices or rituals related to pregnancy and childbirth point to the high value that is attributed to procreation in traditional societies. Through these rituals the contributions of a new mother to the household is acknowledged. Pregnancy rituals are also believed to

convert the obligatory into the desirable by reinforcing the society's central value system (Ibid.: 107). The organization of childbirth manifests itself through these rituals and customs, which apart from having socio-cultural implications also captures the alternative nature of therapeutic reasoning. In traditional systems of medicine, the therapeutic is often collapsed into the ritual; hence extracting one from the other might not only be impossible but also undesirable[2].

One such ritual followed in Mogra is the giving of *huavad* to the woman once she has delivered. The *huavad* refers to herbal sweets that are prepared in ghee (clarified butter) and are culturally valued to be one of the best foods. The mixture of ghee and herbs is said to have medicinal value for the woman, who would otherwise be eating stale or leftover food. The woman is now referred to as *japaiti* as she is said to be in a state of *japa* after she has delivered. During this time she is not only treated with special care and attention but is also relieved of the heavy burden of *dai*ly chores. Although the reality in lower caste and class households maybe different where due to the lack of resources they may not be able to afford ghee for the preparation of the *huavad* or may not be able to stay away from domestic work for as long, but practices such as the *huavad* and *japa* still provide pregnant women with a certain degree of relief which they would not be able to experience otherwise (Ibid.: 107-108). The practice of offering *huavad* and the experience of *japa* form one of the many instances of the world of ritual and the world of therapeutics being inseparably bound together.

Child delivery is exclusively a women's affair in Mogra, as it is in most other parts of rural India, and men are consciously kept away from this realm. Pregnancy is perceived as a "normal and desirable condition for young women" (Ibid.: 108). This is related to the manner in which child delivery within such a set up is not allowed to become a situation that is fraught with fears and trauma. The support mechanisms that are in place cater to provide full comfort, care and support to women when they are in the midst of labour. The indigenous skills of child delivery keeping within an "emotional framework" prevent

[2] For a detailed account on the intertwined nature of ritual and therapeutics in traditional Indian medical systems refer to Frederique Apffel Marglin (1990) and Naraindas (2003)

women from experiencing any kind of alienation or isolation during the time of delivery. The entire household (female members only) comes together around the woman in labour and assists in the many tasks related to childbirth. The allocation of roles takes place on the basis of seniority within the household and kinship rules are relaxed to a certain extent, as Patel observed in the village of Mogra. This involved participation reinforces the fact that the child who is to be born is collectively desired by them and also acts as recognition of the "heroic personal as well as social ordeal" undergone by the mother in the process of delivering the child. "Their frisky movements, pauses, sounds, talk and facial expressions are in accordance with the woman's rhythm of pain, and give the much needed support and encouragement" (Ibid.: 117).

A large part of the pregnancy related anxieties that afflict urban, middle class women are completely absent here. This can be attributed to the distinct way in which childbirth itself is organized, as mentioned above. Knowledge regarding childbearing is attained quite early on in life, through the observance of various customs within the household and the neighbourhood (Ibid.: p.110). An instance of this would be children, when they are around 10 years of age, begin to assist their parents in attending to cattle that are about to give birth. Apart from this, girls are also allowed to remain in close vicinity to women who are in labour within the household[3]. Thus, women growing up within such a context, have a basic understanding of the biological processes of reproduction much before they are of childbearing age themselves.

This alternative cosmology of childbirth comes with its own share of conceptual constructs which need to be located and understood in the light of its context of appearance. Most often these either get brushed aside or are co-opted into their mainstream equivalents. The first of these is the experience of labour pain. Most literature on childbirth deals with it in a manner whereby it is implied that labour pains

[3] Girls, after a certain age, are also allowed to assist *dais* when they go to attend on women in labour. The learning and training process within this system of therapeutics is markedly different form what one finds in the case of modern obstetrics. Since this is more of a hands-on skill acquired by dais over their livetime, the training must incorporate experiential forms of learning which can only occur if younger women assist the more learned ones while attending to laboring women and when they have had children of their own. The training process adopted by the dais when it comes to training the next generation, is closer to the guru-shishya tradition that has been associated with indigenous systems of knowledge.

are experienced by women in a similar manner across different cultural, social and geographical landscapes. Patel (1994: 118) argues that 'pain' is not a phenomenon that is over and beyond the control of social and cultural factors. She claims that "the experience of pain is highly conditioned by the mediation of social and cultural practices" (Ibid) as is amply proven by the ways in which the women of Mogra perceive and negotiate with labour pains. Both childbirth and labour pain are 'naturalized'[4] through cultural training, a matter-of course attitude and its frequent occurrence in a society with high fertility, writes Patel. This is one of the chief reasons why the anxieties that haunt childbirth in a modern setting are to a great extent missing here.

Labour pain is an unavoidable part in the life cycle of a woman. Although it is physically painful, the high social value that is attached to motherhood and a change in the status that follows childbirth go on to help women come to terms with it. The belief in Mogra is that "good, affectionate, loving, selfless, saintly and simple souls have easy child deliveries" (Ibid.: 119) . It is the wicked and selfish who suffer the most during childbirth. As a result, women undergoing labour pain do everything in their capacity to not be marked out in the community as someone who belongs to the latter category. The way in which a difficult delivery is constructed within such a setting is also very different from the kind of understanding the modern discourse of obstetrics gives us. Although our sensibilities based on such a conception of difficult labour might propel us to think that women undergoing severe pain or long labour would be under the double duress of also having to deal with social ostracization, Patel convinces us that this is in congruence with the larger belief system shared by members of the community and that it indeed does act as an effective coping mechanism while dealing with labour pain. Apart from beliefs such as this, the presence of female relatives, who provide immense support during delivery also, ensure that the birthing woman does not become hysterical. Hence, it can be seen that the "prevailing cosmology" provides women with certain coping mechanisms, both at the physical level as well as at an ideational level, to tackle the discomforts endured during childbirth.

[4] Here, I work with the presumption that it is only by means of culture that a process of naturalization is possible. For more on this refer to Judith Butler's 'Gender Trouble: Feminism and the Subversion of Identity'.

The other conceptual category that requires reconsideration is that of the 'expert'. All preexisting literature on childbirth points to the fact that the delivery process in a traditional setting is overseen by the female kin of the woman in labour and the *dai*. The kind of division of labour that takes place within such a setting will be discussed in greater details in the following segment of the chapter, but in order to facilitate the current argument it needs to be stated that birthing work is distributed between all the members present at the time of the delivery. In most cases it is the kinswomen who have a greater role to play during the actual delivery while the *dai* performs a crucial role during the postpartum period. Variations of this can be found in the different states of India and there is no strict demarcation that exists and is applicable everywhere. What emerges from the writings of various authors is that birthing related skill, technique and knowledge is collectively owned and shared by all the women of the community. Giddens' notion of "mutual knowledge" used by Patel (1994) to understand fertility behaviour can be employed to understand the nature of birthing knowledge as well.

Although it is commonly admitted by the members of these societies that the custodians of this knowledge base are the *dais* and that the nuanced expertise they possess in matters pertaining to birthing cannot be contested, the manner in which this expertise manifests itself is very different from what one is accustomed to finding within the modern day phenomenon of an obstetric ward. Writing about childbearing in rural North India, Roger and Patricia Jeffery and Andrew Lyon (2002: 90-108) point to the fact that *dais* alone do not take decisions, once the woman has gone in to labour. The kinswomen present at the site, namely, the mother-in-law and other elderly women, together help during this phase of delivery. In some instances they also noted that women were given oxytocins to accelerate labour, and the decision of when it was time to call the medical practitioner to administer this injection also did not rest in the hands of the *dais* alone. It was a decision that was taken collectively by all the women present there.

Maya Unnithan-Kumar (2002: 109-129) observes similar practices in Rajasthan, where birthing work is divided between "kin-midwives" and "lower-caste midwives" (the latter

from outside the household). While both kinds of midwives are experienced in delivering children, a division of labour exists between them. The "kin-midwife" provides emotional and physical support to the mother and advises the "lower-caste midwife" on when to check for dilation of the cervix and for the progress of the baby in the birth canal. The "lower-caste midwife" assists the mother in the descent and delivery of the baby. She assists the baby out of the birth canal, handles the umbilical cord and helps during the delivery of the placenta. Sometimes the "kin-midwife" single handedly helps the mother without the assistance of a "lower-caste midwife". Unnithan-Kumar also notes that the decision to have a midwife from outside the household depends on the "relative difficulty and danger associated with birthing as estimated by the mother and her kin" (Ibid.: 111-112). This observation proves that the "lower-caste midwife" is considered to have some sort of expertise in dealing with difficult births and can be of help in such times, although under 'normal' circumstances the "kin-midwife" is capable of handling the birthing process all by herself.

The above observations of rural reality have been used by these authors to suggest the deplorable status of the midwife/*dai*, who is denied of any decision making power during the process of delivery or even otherwise. The fact that "the management of labour is not demonstrably in the hands of the *dai*" and that the *dais* bargain[5] at the time of accepting remuneration is assumed to indicate that the *dai* is "not seen as an expert" (Jeffery et. al. 2002: 97). However, another way of understanding this reality would be by reworking the category of the 'expert'. The biomedical perception of the 'expert' would imply an obstetrician in this case, who would be the sole decision-maker in the whole delivery process, so much so that in common and medical parlance the doctor is said to have delivered the baby rather than the new mother. The contrary is seen in operation within a

[5]The Indian system in many ways may be considered to have the structure of a gift economy, where a large number of transactions still take place on the basis of these principles. Hence, the role of the '*dais*' can never be equated with the role of the 'nurse' within such contexts, the basis for the two are fundamentally different. The work ethic of the *dai* is very different from that of the nurse, as she works more out a sense of 'calling' rather than for purely monetary reasons. At a practical level, in rural India, people cannot afford to pay high remuneration for services rendered by a nurse. The '*dai*' on the other hand accepts payments in both cash and kind. However, the most significant point here is that she is involved in a more meaningful and longer relationship with the families she goes to serve, which makes it possible to receive payments over a long duration of time. The people of the village find this more acceptable than having to pay a nurse at one go for a visit which spans less than an hour, in some cases.

traditional setting of birthing. Here, even though it is widely acknowledged that the *dai* has specialized skills required for birthing work, large portions of that knowledge is shared by the women of the community, which is learnt over the course of their lives either through their own experiences of childbirth or by witnessing other births within their own households. In this way birthing knowledge becomes a part of that "mutual knowledge" that is collectively owned by members of the community and is unconsciously passed on through the generations.

With the initial unfolding of a parallel cosmology of childbirth, the following section delves deeper into it to uncover a host of practices related to a specific phase in the birthing process, namely the cutting of the umbilical cord and birth of the placenta. As already mentioned at the beginning, this phase is fraught with tension in academia that can be largely attributed to two factors. The first of them is that the therapeutic practices (if at all one can separate it from practices belonging to other realms of life) that go on within the traditional site of birthing is in stark contradiction to what obstetricians and others trained in biomedicine have come to believe as the norm. The second cause relates to the fact that this is considered to be the most ritually polluting time even within the process of birthing. The upcoming section aims to tackle these two elements of this phase together in a consolidated manner, the same way in which it unfurls itself within this parallel cosmology.

II

The varied ways in which assistance may be provided during delivery leads to fluid categories of workers in the elaborate process of childbirth. Sarah Pinto (2006: 220), writing on childbirth practices in rural Uttar Pradesh, complicates the category of the *dai* by stating that evidence from the ground reveals there is no one person who carries out all the responsibilities, throughout the delivery period. Birthing work can be divided into two main phases. The first phase starts with the woman going into labour while the second

starts once the child has already been delivered. During the first phase of delivery, although a *dai* might be present at the scene, it is the women from within the household who assist in labour. For difficult deliveries, women may resort to calling a specialist from outside the household. These specialists are normally women who are experienced and have earned themselves a name at conducting deliveries in the neighbourhood. They are perceived as the "local experts" and sometimes do birthing work outside of their immediate neighbourhoods, in other areas within the village and sometimes even beyond (Pinto 2006: 220). These women, who are called from outside the household to assist in the delivering process, never actually catch the baby[6]. They move in and out of the room of confinement dispensing advice, helping the woman to walk in order to facilitate delivery and massaging her to ease the pain (Ibid.). Pinto points out that these women sometimes refer to themselves as *dais*, although on most occasions members of the community refer to them by kinship terms or their caste affiliation.

Once the child has been delivered, the next phase is ushered in. The "local experts" mentioned above do not cut the umbilical cord. They may handle the placenta, but only before the cord has been severed, thereby, making way for specialists/experts associated with the postpartum phase. The work in this phase is further split up between two different categories of workers. The first category of workers, known as *dhanuk*s, are the ones who cut the umbilical cord and handle the placenta. The *dhanuk* is the only one who is allowed to be in contact with the new mother and infant during the days when she is considered to be in a state of utmost pollution. The *dhanuk* "navigates the most sensitive and fragile period of confinement" (Ibid.: 218). It is after this initial period that the other category of workers come in, namely the *naoun*s. The *naoun*s are women who belong to the barber community and are considered to be of low-caste but are not considered to be untouchables like in the case of *dhanuk*s. The *naoun* takes care of the new mother and infant for the remaining time of the seclusion during which she massages her in order to speed up the recuperation process. Gradually over this period the polluted-ness of the

[6] From the work of Sarah Pinto it becomes apparent that the question "Who caught the baby?" at the time of delivery is rendered useless. There are a number of women privy to the birth, walking in and out of the room and whoever happens to be there at the opportune moment 'catches' the baby (Pinto 2006: 225). Delivery work is not done by the same category of workers who cut the cord or bury the placenta, as will be demonstatred ahead..

new mother diminishes and by the end of it she is ready to re-enter her social world. Also, physically her body has regained the strength lost during childbirth (Ibid.).

While postpartum work is attributed to particular caste groups (predominantly lower castes and untouchables), anyone is permitted to do delivery work. Many a times, however, the "local experts" who are called in from outside, belong to the lower castes (Ibid.: 223). Both *naoun*s and *dhanuk*s also do delivery works within their own households, which results in additional obscuring of the situation in terms of categories of 'work' and 'workers'. However, even though there may some degree of overlap between delivery and postpartum personnel, these two phases of work are "categorically different forms of labour" (Ibid.: 225). In tribal Bihar, the responsibility of cutting the cord falls on the husband, while in some parts of West Bengal and Madhya Pradesh any other woman, apart from the *dai*, can cut the cord (Sadgopal 1996: 166). As a result, Pinto argues, that "it becomes difficult to talk about "the *dai*" as a single kind of figure" (Ibid.).

The work that is done by the *dhanuk*s in Uttar Pradesh (and by others in different parts of the country) is the primary area of focus in this segment. The work of cutting the cord and handling of the placenta cannot be understood without first identifying the manner which the birthing work is segregated on the basis of which different birth workers emerge. *Dhanuk*s normally belong to the untouchable castes as they are in contact with the mother and the infant during the phase which is perceived as being the most polluting. This is also a time, which is replete with certain indigenous therapeutic practices that have gone by completely unnoticed up until the very recent past. With the rise of new concerns in biomedical discourses regarding the precise moment at which the umbilical cord should be snapped, the indigenous practices of the *dais* have the potential of opening up this debate even further. However, as mentioned before these practices occur within an alternative cosmology and in order to appreciate the value of these therapeutic practices one must analyze them in the context within which they occur. This entails looking at the varied rituals and customs that are entangled with the therapeutic practices of cord cutting and handling of the placenta. Also intrinsically linked to this are questions regarding the status of the worker who is the custodian of this rich therapeutic heritage

and yet at the same time is implicated as someone who is considered to be in the highest state of ritual pollution by virtue of the very work that they do.

The belief amongst most *dais* is that the umbilical cord should not be cut until the placenta is delivered. The placenta must be connected to the baby until it is out of the mother's body. It only once the placenta has been delivered and the child has taken her vital breath and let out her first cry is the umbilical cord cut (Singh 2006: 163-167). There are numerous ways in which *dais* from different parts of the country theorize about these practices, but they hold in common the belief that cutting the cord before the placenta has been delivered is harmful both for the mother and the child. The mention of cord-cutting evokes a kind of "reticence, silences and impasses" that point to the "shadowy nature of this work" (Pinto 2006: 228). In many parts of the country, it is seen as 'sinful' to sever the cord. It is with the cutting of the cord that a "single matrix becomes separate entities: the placenta enters the realm of death and decay and the baby enters the world, becoming human, social, alive" (Ibid.).

The infant-cord-placenta forms an integral bond within this alternative cosmology of birth. The placenta is seen as having nurtured the baby inside the mother's womb for nine months and the need to sever the link between them is not an immediate concern. The placenta is referred to as the '*phool*' (the flower) while the newborn is the '*phul*' (the fruit) (Chawla 2006: 57). The placenta is viewed as containing the life-force (*jee*) and is seen as the protector of the baby (Chawla 2001). *Dais* use the term *jee* to refer to the "palpable pulsations which they are able to detect in the body generally and the female pregnant body specifically" (Ibid.). Chawla states that *dais* can detect, in the third or fourth week after conception, the splitting up of this life-force energy that supports the new life of the embryo. This is also how many experienced *dais* detect pregnancies. The word '*jee*' refers to '*jee*van' and is similar to the concept of 'Chi' in Chinese medicine. It also comes very close to the conception of '*prana*' or '*ojas*' in Ayurveda, which signifies all life energy (Ibid.). The manner in which the placenta is dealt with after the umbilical cord has been cut is reflective of the vital status that it is endowed with within traditional cosmologies.

Irrespective of who cuts the cord, the practice of waiting for the placenta to be delivered before cutting the cord is common to almost all the states of India. There are mainly two reasons for observing this practice. First, the placenta is seen as an essential means of reviving seemingly lifeless infants. Only once it has been determined that the child has started breathing normally is the umbilical cord cut. Singh observes that the severing of the unit of the placenta, cord and the infant is "done slowly and mindfully so as to let nature take its own course in stabilizing the newborn outside the secure womb" (Singh 2006: 170). Second, it is believed that if the cord is cut before the placenta then there is a tendency of the placenta to travel upwards (Sadgopal 1996: 166). Women also say that the placenta can rise up and strangle the mother if the cord is severed too early or that "the life-force it contains may expand and smother her" (Pinto 2006: 227). As Chawla explains, what is meant by this is that the energy that should be pushing the afterbirth out of the body remains behind in the upper part of the body thereby making the delivery of the placenta that much more difficult. At no point is it meant to imply that the placenta actually travels upward inside the body. *Dais* are aware of the poisonous nature of the placenta if it remains behind in the mother's body and is not expelled out once the child has been delivered (Patel 1994: 125). However, *dais* come to 'know' and understand the human body through "an image-laden language which represents the energetic processes" (Chawla 2006: 47). This is in direct contrast to the biomedical understanding of "the body in terms of matter, organs" and "discreet physiological systems" (Ibid.).

A practice that been observed by many researchers across different states of India is that the placenta is used to revive infants who appear lifeless at birth. The publication titled "Hearing *Dais*' Voices: Learning About Traditional Birth, Knowledge and Practice" brought out by MATRIKA (Motherhood and Traditional Resources Information Knowledge and Access) based on research carried out in four different states of the country, documents some of the ways in which *dais* have successfully used the placenta to revive infants. According to a *dai* from Rajasthan, when a baby does not cry after birth, she heats up the placenta, slaps the baby's legs, blows in the ears and slaps the back of the baby. In Bihar it was observed that when a baby was not active or did not cry then

the *dai* would rub the cord and place a coin or grain of rice underneath it. The assumption was that by rubbing heat would pass through to the infant and revive her. Infants are also resuscitated by rubbing the navel and heating the placenta in Bihar. In Punjab it was seen that when a baby would be born weak the cord would be milked towards the baby. With the flow of *jee* from the placenta and the extra blood the infant would be revived. *Dais* in Delhi claimed that if the child appeared to be a stillborn the placenta would be placed on a heated surface or burning cow dung cakes in order to facilitate the flow of *jee* towards the baby. It is only after this that the cord is cut. Even in the state of Haryana it was noted that *dais* waited for the placenta to be delivered before severing the cord, although further details regarding the kind of therapeutic use it was put to is missing in the study (Kakar 1980: 43). What comes through from these documented instances, cutting across the different states, is that stillborn or weak infants are seen to be stimulated by heating the placenta and milking the cord which ensures the flow of *jee* towards the child.

As mentioned above, *jee* is life-energy and not purely matter. It is presumed that even after the cord stops pulsating, *jee* can pass from the placenta to the infant. Being closely related to a humoural understanding of the body, it is through heat and warmth that the life-force is seen to be stimulated. In traditional systems such as the *dais'*, the key to good health is seen to be invested in the free-flow of *jee*. Apart from this, the publication also lays down the fundamental principle on which Indian forms of massage, an important recuperative mechanism with regards to pregnancy and childbirth, is based. Indian massage techniques are driven towards moving negative energies or blocks down to the limbs and out of the body and clearing up the *nasae* or channels for *jee*. The restoration of balance of the *panch mahabhuta* is also part of the therapeutic work of promoting *jee* (MATRIKA: 13).

Anuradha Singh (2006) suggests that the practices of the *dais* can be comprehended better by extending an Ayurvedic analysis to it. Her claim is that Ayurveda provides a textual basis for the *dai* tradition of India, and if the practices of the *dais* are understood n accordance with the foundations of Ayurveda then a large part of the practices which remain unexplained may be grasped to a greater degree. For instance, both the Ayurvedic

texts as well as traditional *dais* refrain from clamping the cord before the placenta has been delivered and the child has let out her first cry. The Ayurvedic texts also lay down specific instructions on how the cord should be cut. It says that a space of eight fingers must be left from the root of the navel; the cord must be cut with a sharp knife and tied tightly with a string. It also states that the cord needs to be cut properly in order to prevent the many abnormalities that could arise from it. Although the Ayurvedic texts mention a delayed cutting of the umbilical cord, none of the other practices of the *dais* used to revive infants, find any mention in them. As a result, though there may be similarities between many of the practices of the *dais* and what is mentioned in Ayurvedic texts, the *dai* tradition is predominantly an oral one. To continually try and validate the practices of this oral tradition with the help of other textual traditions, irrespective of the fact that they be equally indigenous and have many commonalities, is to undermine the worth of the former. *Dais* learn their skills through 'hands-on' methods "acquired through "observation and imitation", and the intuitive aspects of midwives "knowledge" as opposed to abstract, verbal, and visual knowledge" (Pinto 2006: 222). Pinto, quotes from the work of Brigitte Jordan to stress that such kinds of skills are based more on an "ability to do" rather than the "ability to talk about something, and indeed, it may be impossible to verbally elicit from people operating in this mode what they know (how to do)" (Jordan 1993: 190 as quoted in Pinto 2006: 222).

Dais too, much in the same way as obstetricians, hold the view that a retained placenta can be poisonous for the mother's body and every effort should be made to facilitate its delivery, even though the idiom through which this is expressed is dissimilar. In the case of a retained placenta, or a prolonged labour period in the delivery of the placenta, *dais* massage the stomach with heat producing oil. Usually a mixture of *ajwain* and mustard oil is used in such a situation, which warms the stomach and the placenta is dispelled within some time (MATRIKA: 50). In other instances, where a massage fails to facilitate the delivery of the placenta, the *dai* may "roll the cord around the index finger and very slowly twist it and pull it out. With our other hand we press her stomach" (Ibid.). Sometimes, according to *dais* in Delhi bamboo leaves may be boiled and given to the mother in order to expel that placenta (Ibid.). Apart from these methods, there are

occasions where hair is put into the woman's mouth in order to make her gag. This too speeds up the process of delivering the placenta (Singh 2006:164).

With the whole unit of the placenta, cord and infant outside of the mother's womb, the cord is clamped. Once this process has been completed the way in which the placenta is perceived from here on is totally reversed from the earlier conceptualization. It has now gone from being seen as "a thing of utility and shared soul with the baby" to being something that threatens the life of both the mother and the child. The placenta attached to a part of the umbilical cord is considered a highly potent material that can be used for black magic and can cause the infant bodily harm[7]. Even after the cord is cut and the child is physically separated from the placenta, the bond that was created between them over the duration of the nine months is said to still remain. The "force of desire" can be directed towards the infant through the placenta either by consumption or by the "covetous gaze" known colloquially as *nazar* (Pinto 2006: 227). As result, Pinto claims that the placenta is disposed of very carefully. It is "transferred to realms of decay and invisibility: tossed in ponds or rivers, buried or burnt" (Ibid.). The placenta of a boy maybe buried somewhere inside the house[8], who is said to always retain a connection with the place where his placenta is buried, implying the house of birth. The placenta of a girl, on the other hand, is disposed in more fluid spaces like ponds, rivers and trash heaps signifying the eventual transition from her natal to her affinal home (Ibid.: 229). In parts of Rajasthan, the placenta and cord are buried along with rice, sweets, turmeric, ornaments and money. Prayers are offered to Mother Earth so that She may accept the "dirty stuff". Also it is believed that if the placenta is buried upside down, instead of in a straight position, then the baby will vomit. A fire may be lit next to where the placenta and cord are buried in the house, to ward off malevolent spirits (MATRIKA: 42). It is believed that the child's health is dependent on the manner in which the placenta-cord-sac are handled and disposed (Ibid.: 16)

[7] If the body is in a constrained state, argues Das, it cannot be used for magical manipulation. The unbounded body on the other hand is extremely conducive for magic which explains the depictions of witches with flowing hair and long nails (Das 1976: 259). As a result, bodily secretion, which have to be removed after the end of a period of impurity are potent material for magic, sorcery or witchcraft.

[8] Patel, writing in the context of Mogra, also makes similar observations where the umbilical cord is buried in the corner of the courtyard (Patel 1994: 127)

The conceptualization of the placenta before the cord is severed is markedly different from how it is perceived once the process of cord cutting is completed. This difference is also visible in the way women who deliver the baby handle the placenta before the cord is cut but never after. The cutting of the cord and the handling of the placenta after is almost inevitably carried out by postpartum workers belonging to the lower caste groups. While the pollution or dirt of baby delivering can be washed off and contact with 'dirty' substances during this phase does not have polluting effect on their kin, postpartum workers incur much more severe forms of pollution which seldom ever get washed away. The wrath of this is incurred not only by their immediate kin but also by the whole caste group. It is the postpartum worker who steers the transition of the placenta from being considered an "embodiment to disembodiment, from beneficial to threatening, from located to excessive, from proper to transgressive utility" (Ibid.: 228). Having performed this act it rests upon the postpartum worker to "correctly locate the newly transformed object so that it does no harm" (Ibid.: 229).

The first polluting act performed by the *dhanuk* lies in the severing of the umbilical cord itself. In many parts of the country is seen as a 'sinful' act as in entails the 'death' of one entity (mother-child) to give rise to two separate ones. It is necessary yet polluting, a theme that will be dealt with at length in the next segment. The cord is considered to be a living entity at a physical level while at the same time being a symbol of the bond that is shared by the mother and child for nine months inside the womb (Chawla 2001). The placenta is metaphorically even referred to as "another mother" (MATRIKA: 14). *Dais* usually offer something to the gods before performing the act of cutting of the cord. In the words of a *dai* from Rajasthan, she is at once considered to be "a *ma*, a *vaidya* and a butcher" (Ibid.). While the first two categories are relatively unproblematic, the third beckons us to probe this area further. The upcoming section deals with the notions of 'paap' or 'sin' associated with birthing work and the consequent evoking of the metaphor of '*narak*' while addressing questions regarding the status of the postpartum worker

III

Following the birth, for a period of six days, the new mother is considered to be in a state of *narak*. On this day, the *dai* checks whether the stub of the umbilical cord of the infant has fallen off. She gives both the baby and the mother their purificatory baths, after which the level of pollution is said to be considerably diminished. The room of confinement is cleaned by the *dai* and the dirty clothes of the mother are washed (MATRIKA: 13). In the birthing tradition of *dais*, birth time is seen in terms of the "opening of the body" and the "closing of the body". *Narak* can be interpreted as representing the open body. At this time "the womb, which is normally closed, is open and the female fluids of menses and lochia are flowing" (Ibid.: 15). The field of *narak* can therefore be seen to function as a therapeutic construct which facilitates a host of non-interventionist therapeutic practices of the *dais* (Chawla 2006: 60). Viewed in this way, *narak* then begins to imply the inner body that is invisible to the eye, with special reference to the reproductive power of the female body (Ibid.). Postpartum period, when the body is still open, as a result, is referred to the period when one is in *narak*. Chawla further states that *narak* is also spoken of as the underground and the fertile realm where Bemata, the goddess of birth, dwells[9]. A reinterpretation of the concept of *narak*, for one, can aid the process of reconstruction of the arena of birthing within a traditional system.

Veena Das (1976) puts forward the notion that ritual impurity can be better understood as being symbolic of a period of liminality, which is experienced by individuals during events such as birth and death. At this juncture, individuals experience their "social world" as separate from the larger "cosmic world" which they are also a part of, giving rise to a period of liminality. The period of liminality coincides with the period of impurity in most cases. Das provides the example of the *sutikasasthi* to validate the above argument. On the sixth day after birth, the child is ceremonially offered to the goddess

[9] Raheja (1988) elucidates one of the origin tales related to Bemata in her work on ritual prestations amongst the Gujar, where a young girl who was married off to a boy who was going to die by the age of twelve. When the boy's time was up she very cleverly tricked the goddess *Bemata* into sparing her husband's life, as a result of which *Bemata* had to sacrifice her own son to *Yamraj* instead of the young Brahman boy. Bemata's son's wife was enraged with this and it is said that while the mother-in-law goes about granting people sons, the son's wife goes about granting couples daughter. Both, the mother-in-law and daughter-in-law are referred to as Bemata by the villagers. (Raheja 1988: 96-97).

Sasthi. It is believed that on this day, Brahma comes and writes the future of the child. All the rituals are spun around the theme of the ceremonial offering of the child and the descent of the gods to write her future. "The individual biography takes on the character of events or*dai*ned by gods" (Das 1976: 257). Only once the rituals of the sixth day are completed does the impurity begin to diminish. Hence, one can see that the period of impurity overlaps with the period in which the child is considered to be in a liminal zone. With the rituals of the sixth day, the child is incorporated into the "cosmic world" (Ibid.). The "social world" and the "cosmic world are now experienced as an integrated whole, just as before (Ibid.: 248) Das argues that impurity related to birth and death, seen as being coterminous with "liminality" is more conducive for an understanding of the caste order[10] rather than equating it a notion of pollution which is incurred "through bodily processes" (Ibid.: 257).

With the reinterpreting of *narak* as the period when the body is "open" and the period of impurity as a period of liminality, we are confronted with another integral aspect of birth within the traditional setting, namely, that of the ritual prestations which are made after the birth in order to remove evil and inauspiciousness from the household where the birth has occurred. The burden of this ritual too lies on the shoulders of the *dai*, leading to a further negative construction of her role within the traditional site of birthing. Raheja (1988) argues that events such as marriage, death and birth are loaded with inauspiciousness. Through bodily connections there is a "spontaneous flow of inauspiciousness" which is created at the time of marriage, attenuated at the time of death and transformed at the time of birth (Raheja 1988: 58). According to her, at all these points, in the normal life-course of individuals, inauspiciousness is said to be circulated amongst members of the household where these events are occurring. It is towards the removal of this inauspiciousness that the notion of the *daan* is set up. Different kinds of

[10] Das (1976) using Berger's concept of the sacred and the profane, propounds that there can be two levels of understanding of the profane. The first, understood simply, implies the lack of the sacred. The second and deeper understanding of it is that by being separated from sacred there is a chance of individuals of slipping back into the state of chaos out which the cosmos emerged. Therefore punishment for impurity can be interpreted in terms of the lack of protection from the sacred against the terrors of 'chaos' (Das 1976: 260-261)

daan are given at different events relating to the specific kind of inauspiciousness that is incurred.

Childbirth is seen as an event which is extremely vulnerable to inauspiciousness that can affect the health of both the child and the mother, apart from other members of the household. Hence, many different types of ritual prestations are made, right from the time of labour, to remove inauspiciousness and safeguard the health of the mother and the child. Women of the household, circle *sawa rupiah* (one and one quarter rupees) around the woman in labour, in order to make the childbirth an easy and speedy process and to remove the inauspiciousness or danger presented by the *dev-pitr* (ancestor gods) (Ibid.: 94). This money is then given to the wife of the family Brahman. However, during childbirth, the household is said to be in a state of impurity (*sutak*) and therefore no *daan* will be received by the Brahman during this time. It is, as a result, kept away safely and given to the family Brahman only once the period of *sutak*[11] is over (usually 40 days). In this way only the inauspiciousness is transferred and not the impurity (Ibid.).

The kind of prestations made to the *dai* after the delivery is similar to the *daan* received by the Brahman in the above mentioned instance. It is through the prestations that she too removes the inauspiciousness that inflicts the household where the birth has occurred. During the delivery itself, if labour is slow or painful, a container with grains and a set of clothes worn by the woman in labour is put underneath the cot after the ritual of *chuwana* ("causing to touch") is performed, which is later given to *dai* (Ibid.: 95). Through this the inauspiciousness that was preventing an easy birth was trapped in the clothes and grain and was successfully transferred to *dai*. It is important to separate the category of inauspiciousness from the category of impurity while analyzing the concept of *daan*, especially within the realm of birthing. The Brahman family and the untouchable or low-caste *dai* are used to transfer inauspiciousness in exactly the same manner, barring the time of acceptance of the prestation which is a function of impurity and not inauspiciousness.

[11] Veena Das claims that the term *sutika* comes from the verb *su* which means "procreating, begetting or bringing forth". While *sutri* refers to the female genitals *sutika* is used to refer to a woman who has recently delivered (Das 1976: 259).

A further analysis that can be made based on the arguments made by Raheja (1988) pertains to one particular kind of prestation referred to as the *pujapa*. This is a kind of prestation oriented towards the deities and is necessarily performed by a woman who is a wife of a member of the village (Pahansu). Special food items are offered to the deities and the remainder is given to the recipient of the *pujapa* of that deity (Ibid.: 173). The other thing that Raheja points out about the *pujapa* is that the recipient of this particular kind of *daan* has to be someone who in some ways resembles the deity (Ibid.: 201). The prestations made to the *dai* can also be read on similar lines. It has been argued that the Mother Earth or Bemata (the goddess who dwells in the fertile underground) is said to split herself in two during childbirth, namely into the mother and the *dai* (Bhattacharji 1993 as quoted in Chawla 2006:20). If the *dai* is herself an embodiment of the goddess, then ritual prestations made to her to remove inauspiciousness after childbirth can be analyzed in a similar manner as the prestation of *pujapa*. It is through Bemata and her embodiment, the *dai*, that the inauspiciousness incurred during birth is removed along with the belief that an appeasement of the Bemata will safeguard the future health of the child.

The performance of the act of cutting the cord is replete with the symbolics of sacrifice. In order to reconstruct the site of birthing and make possible a reclaiming of the knowledge base and status for the *dai* within this fray, it becomes important to revisit the stage of cord cutting, the source of ritual pollution in this context. Most traditional *dais* speak of cutting the cord, which severs the physical bond between the child and the placenta ("another mother"), as "*paap*" or great sin. Chawla (2001) however, argues that this is a "*paap*" that none of the *dais* express any sort of "guilt, shame (*sharam*) or regret" for. Cord-cutting in many ways can be seen to resemble a sacrifice, in the same way that the corpse is seen as a sacrificial offering (Das 1976: 254). The cord, containing *jee* or life-force is perceived as being alive, and although severing the cord is essential in the process of establishing the newborn as a separate physical and social entity, it still involves a kind of "sacrificial violence" (Parry 1994: 178 as quoted in Pinto 2006: 229).

Through the sacrifice, both the sacrificer and the cosmos are recreated (Parry 1994: 179). Parry (1994) goes on to enumerate three kinds of birth that occur based on his textual analysis, namely from one's parents, from sacrifice and from cremation. According to him, death rituals are packed with the symbolics of birth and parturition. During the fifth month of pregnancy, the vital breath is thought to enter the embryo through the suture at the top of the skull. It is from here that the vital breath is released during the performance of *kapal kriya*. Parry (1994) makes a comparison between this death ritual and the act of cutting the umbilical cord performed by the midwife to argue for the necessity of an untouchable specialist on both these occasions. However, the point that is overlooked is that while in the case of birth it is the midwife who carries out the actual sacrifice (severing the cord), in the case of death rituals although the untouchable maybe the one "providing the sacred fire and superintending the pyre", it is the chief mourner who performs the *kapal kriya*. It is the performance of the *kapal kriya* that is said to involve a similar kind of marked out "sacrificial violence" as cord cutting does, although the sacrifice is facilitated by the sacred fire. The parallel between cord cutting and the rite of the *kapal kriya* is also rooted in the fact that it is only after the *kapal kriya* has been performed that the impurity of death begins to afflict the kin of the deceased, much in the same way as the impurity of birth is heightened with the cutting of the cord (Das 1977: 125).

The idioms of birth rituals related to cord cutting are infused with the symbolics of death, contrary to what happens in the case of death rituals. Referring back to Parry's (1994) argument relating to the three kinds of birth which occur within the Hindu cosmology, it can be argued that all three kinds of birth take place within the process of birthing. Birth "from one's parents" refers to the material aspect of birthing. As mentioned earlier the cutting of the umbilical cord refers to birth that occurs as a result of "sacrifice", where the *dai*, being the sacrificer, is also reborn through the performance of the sacrifice itself. The final kind of birth may also be found here if one interprets the rites and rituals associated with the disposal of the placenta with those of cremation rites. What comes to the fore

through these birth and death rites is that, as has been argued by many scholars, within the Hindu cosmology one cannot put the sacred and the profane on opposite ends of the spectrum, but the need is to understand them in terms of a continuum. The setting up of 'life' and 'death' occurs in a similar manner, where they are seen as leading into each other, rather than binary opposites. Where life ends, death begins and where death ends there is life. Hence, most death rituals invoke the symbolics of birth and parturition while the reverse takes place when it comes to birth rites.

'Death' is the domain of the untouchables and low-caste individuals, given their perpetual impure existence whereas 'birth' or 'creation' can be seen as the domain the high caste Brahmans. Through such an opposition, the obvious division of ritual labour would be that the arena of birthing would be under the supervision of the Brahman, whereas ritual work related to death would be conducted by the untouchable. However, the reverse is seen to occur, where the rites related to birth are solitarily overseen by the low-caste or untouchable *dai*. Chawla (2006) quotes Sukumari Bhattacharji to argue that the *dai* can be seen as the "substitute priest" working between the worlds of the sacred and the profane just as she works in pre-natal and post-natal stages of pregnancy. Her position is equated with that of the shamaness and it is argued that she is probably able to exercise this because of the 'dirty' nature of this realm. "The birth rite is the only wholly female rite where male presence is precluded" (Chawla 2006: 20). It "uniquely empowers the female assistant" while at the same time it is the "only rite where a new life enters our world" (Ibid.).

The above mentioned reversal of ritual labour can be made more explicit through the following accounts, namely, the practice of animal sacrifice to the goddess Kali within the household (Samanta 1994) and the observance of a particular rite in the Puri temple every twelve years (Marglin 1988) . My argument here is that through the reversal of the symbolics of birth and death, a reversal of ritual labour occurs that facilitates the entry of certain individuals into domains that they are otherwise kept apart from.

The domestic sacrifice that takes place on *Kalipuja* is exclusively a male domain, writes Samanta (1994). When the *puja* is celebrated in the worshipper's home, the animal may be immolated by the officiating Brahman or by the senior most male member of the patrilineage[12] (Samanta 1994: 783). Here, death (of the animal) can be understood through the symbolics of birth, where, through the sacrifice, the sacrificer is reborn (Parry 1994: 179). This is the exact way in which the death rituals, as described by Parry (1994), are conceptualized. In this way, through the act of 'sacrifice', a ritual of taking of life can come to be understood through the idiom of birth. Hence, even though the chief mourner[13], under normal circumstances will not perform any kind of life-taking activity[14] (an arena of work relegated to the untouchables who deal with carrion, carcasses etc.) can execute the *kapal kriya.* Consequently, although the at a ritual level, the *kapal kriya* is the point at which the corpse is considered have died, with the releasing of the vital breath, the act is ritually converted into a regenerative one from the perspective of the symbolics of birth inherent in the conceptualization of the sacrifice.

In the case of the untouchable *dai*, who performs the act of cutting the cord, it is the symbolics of 'death' which are evoked in ways similar to that of the recreation of the idols at the Jagannatha Temple. As Marglin (1988) observes, in Puri, at the Jagannatha Temple, during the time when the deities are said to be suffering from illness (smallpox), it is only the low-caste temple servants who can cater to their needs. These low-caste temple workers are supposed to be the descendants of tribals referred to as '*daitas*'.

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[12] Attaining *Diksha* is essential for all for active participants in the performance of rituals. Both men and women need to perform this act in order to be contact with the idols and perform other related tasks like the cooking of the *bhog* (food offered to the idols which is then distributed to everyone). The only ones who were not required to attain *diksha* before a ritual were the *poita* (sacred-thread) wearing Brahmans, while the only ones who are not allowed to attain the *diksha* are the low castes and untouchables (personal communication with my mother, Dipty Mukherjee).
The attainment of the diksha, by this logic, confers temporary Brahman status to non-Brahmans and women to perform the essential functions at the time of a ritual.

[13] Diksha endows him with temporary Brahman status to perform the act of sacrifice/ritual in the case of non-Brahman chief mourner.

[14] The picture gets further complicated if the deceased is a Brahman, as then taking of his life at the time of the *kapal kriya*, even if it is only ritually or symbolically, would amount to one of the five major sins that results in permanent impure status , namely murder of a Brahmin, consumption of intoxicant beverages, sleeping with the wife of a guru, theft and associating with those who have committed these sins (Das 1976: 260). The first of these is of particular import. My contention here, however, is that such an eventuality is avoided as the symbolics of the rite coverts it from an act that causes 'death' to an act that gives life.

Every twelve years, in an extended version of this ritual, the idols are completely destroyed as it is said that the deities die of their illness. It is the low-caste temple workers who carry out the hacking and burying of the wooden idols and are also the ones who observe the funeral taboos and rites (Marglin 1988: 137). The new idols are created once the old ones have been destroyed. This too is carried out by the low-caste workers/artisans who, as Marglin (1988) suggests, are considered to have regenerative powers as they are closer to the earth (Ibid.: 138). If one symbolically looks at the act of creating new idols to resemble the process of 'bringing life' then one can see the reversal of the ritual division of labour. 'Birth', here too, is expressed first through the idiom of death, in the destruction of the older idols, enabling the entry of the low-caste temple worker into this 'sacred' realm, who would otherwise have had a polluting presence, even though his ritual contribution might be imperative for the performance of the *dai*ly 108 rituals within the temple, as argued by Marglin (Ibid.).

It is this reversal of ritual labour that enables the *dai* to take complete charge of the sphere of birthing. It is also the way in which an otherwise marginalized set of individuals, bearing the brunt of the double disadvantage of being untouchable women, can negotiate and circumvent the constructs of the caste-Hindus (Pinto 2008). It is argued that Dalit women often deny that the work that is done by them in this arena is considered polluting. This is evident in the way claims are laid on the profession of birth work by the *dais* themselves, who refer to it as "ours" (Ibid.). On the contrary, women belonging to other caste groups refuse to this work not only out of the fear of ex-communication for being involved in polluting work, but out of respect and acknowledgement of the fact that it is rightfully owned by the *dhanuks* (Pinto 2006: 221). While the former has received a lot of attention in scholarly writings, the latter has failed draw enough attention.

The site of birthing brings questions of emancipation based on gender and those based on caste to collide head on. While the preoccupation of feminist scholars has been the first, the preoccupation of indologists has been the second. The reality is that on numerous occasions the discrimination and ostracization faced by women belonging to untouchable and low-caste communities involved in birth work cannot be denied. However, what is

also a reality is that the *dai* tradition is a culturally suited and therapeutically vibrant tradition that is on the verge of disintegrating. These have been irreconcilable aspects of the same phenomenon. Questions of gender and caste need to be raised in consolidated manner regarding childbirth in India so as to break the deadlock that still persists in most scholarly writings.

Conclusion

My primary aim in this dissertation is to categorically highlight some of the contradictions that exist in the practice of modern medicine with specific reference to the last stage in the birthing process, which involves the cutting of the umbilical cord and the delivery of the placenta. The first chapter, with a detailed history of the medicalization of childbirth, both in the West and in the colonies, provides the underlying pretext for the developments that occurred in the twentieth century in the field of obstetrics. With this discussion in the background, the second chapter moves on to assess the processes by which midwives in the West were rendered unemployed with the ascent of male professionals in the field. The subsequent rise in the use of technical instruments in dealing with birth accompanied the rise of male professionals in the practice of obstetrics. The arguments put forward in this section of the chapter are further elucidated in the next one, through an explication of the practices surrounding cord clamping and the placenta. The third chapter, in contrast to the practices of the modern medicine, proposes an alternative approach to view the body and its reproductive function. Such a view comes with a host of practices that strive to incorporate bodily processes within a specific paradigm which differs greatly from the Western one. Practices surrounding the cutting of the cord and birth of the placenta are examined within the Indian traditional system. An analysis of the varied therapeutic customs aid in shedding light on the different social and cultural structures that come into play during childbirth.

Before entering a discussion on the crucial findings of the dissertation, it might be worthwhile to consider the implications of the terminologies of 'midwifery' and 'obstetrics' itself. Midwifery, or the art and science of providing assistance during pregnancy, especially during childbirth, was a domain mostly under the supervision of women. References have been made to midwives in ancient texts, including the Bible, attesting the fact that they were an essential part of the society. With the passage of time, men began to enter the profession of midwifery as a consequence of the "spirit of

enquiry" of the Renaissance which had come to guide the lives of individuals in Western society between the fifteenth and seventeenth centuries (Donnison 1977: 10). This "spirit of enquiry" had already transformed the functioning of the other branches of medicine and was making its impact felt on the processes of childbirth. Numerous new advances had been made in this field during this time, the credit of which went wholly to the medical men who had entered it. This acted as a further impetus for male professionals to penetrate the sphere of midwifery, or more precisely the sphere of 'operative midwifery' (Ibid.: 11). By the 1600s England had recognized the existence of a new class of practitioners and went as far as adding the word 'Man-Midwife' to the medical lexicon (Ibid.).

By the nineteenth century, the profession was still being referred to as 'midwifery' while colossal changes had come about in the very nature of its practice. The first major transformation that took place was that the profession was almost entirely taken charge of by men, and a simultaneous vilification of the 'original' female midwives occurred so as to strengthen the hold of the new professionals on the field. With this accomplished it was only a matter of time before the earlier loosely structured practice of 'midwifery' based primarily on experiential knowledge of elderly women, as mentioned in the second chapter, was given a rigidly structured disciplinary form. This implied a reformulation of the practices of 'midwifery' itself which had begun to be propelled towards "operative midwifery" by this time. Hence, by the mid-nineteenth century the field of midwifery was being revamped into the discipline of 'obstetrics' as we know it today, although it was not until a few years after, that the term 'midwifery' was abandoned for the use of the term 'obstetrics' to refer to medical practices related to birthing. In the current scenario, with the reclaiming of birthing knowledge by women in the West, 'midwifery' and 'obstetrics' have been constructed as two distinct bodies of knowledge, when in reality until the nineteenth century these two terms were used interchangeably. [9]

In order to provide a context for a discussion on the principal theme, a number of correlated areas were given importance in this dissertation. Hence, in this concluding segment I will primarily concentrate on umbilical cord cutting and deliver of the placenta

and put forward the central issues that came out of an analysis of these practices within both, modern obstetrics and the Indian traditional systems. My ultimate aim, through this work, is to raise certain epistemological questions regarding the discipline of obstetrics by comparing the practices of these two distinct schools of thought. Multiple levels of analysis, embedded in questions of gender, caste and class have emerged as a result of this analysis, as issues pertaining to epistemology are neither unrelated nor work independently of these larger questions. Addressing matters regarding gender and caste, which have been inextricably linked with the cord clamping and the birth of the placenta, especially in the Indian context, was therefore one of the prime concerns.

The first conclusion that I have reached is with regard to the broader question of cognitive modes of operation of the modern science of obstetrics. Practitioners of science have often historically denied the influences of social and cultural beliefs on its epistemic domains. This however simply reveals the spurious nature of the motivations directing the discipline. The process of professionalization of obstetrics in West was motivated by an alarming rate of infant mortality and a resultant decrease in the size of the population. It was believed that such a trend would leave the nation without enough citizens to man the machines of industry and war. Thereafter the responsibility of raising 'healthy' children was converted from an individual, moral duty to a national one on the part of the mothers (Hunt 1988). In the modern context, pregnancy and childbirth practices have become a marker of 'progress' which acts as the guiding force for implementation of 'new' policies and techniques in the 'developing' world.

Concerning cord clamping and delivery of the placenta, it has been shown in the second chapter that there exists no consensus on what constitutes the 'safest' way of 'managing' the third stage of labour. 'Safety' has become the new trope, through which childbirth practices are now being perceived. It has been claimed by 'experts' that in order to make birthing 'safe', the 'active management of the third stage of labour' is an absolute necessity. In the West, nineteenth century onwards, practitioners believed that it was too risky to leave it up to nature to take its own course as far as the placenta was concerned and that it had to be 'managed' so as to reduce the threat it posed for the woman. This is

an idea that has resonated in the discipline till date. However, even back then it was acknowledged that not all cases posed similar levels of risk, but as has been mentioned earlier, whether a pregnancy is 'normal' can be determined only in retrospect, after the delivery is over (Murphy-Lawless 1998). The umbilical cord that attaches the fetus to the mother, within a scheme of 'active management' has to be severed immediately on birth. Apart from being a highly intrusive method, 'active management' raises certain important questions regarding the practice of the immediate clamping of the cord as well.

The field of obstetrics is undecided on the question of the appropriate time of cord clamping. Some practitioners believe in early clamping. There are others who feel that delayed clamping has more benefits, while there were still others who think both were equally beneficial or harmful depending on particular cases. On the one hand, while practitioners believe that the 'active management' can reduce postpartum haemorrhage, it has also been proved that a delayed clamping of the cord is more suitable for infants on most occasions. Some of the major diseases like infant anaemia which plague infants in the 'developing' world can be reduced to a significant extent with delayed cord clamping. Hence, to put it simplistically, the field can be seen to be divided into those who argue from the point of view of the mother's safety, while there are those who argue from the point of view of the infant's future health. Although there is strong evidence to prove the latter, there is no real evidence that vindicates the resort to 'active management' on every instance.

Having reviewed both nineteenth century medical texts as well as recent documents on the practice of obstetrics, I am yet to be convinced of a viable 'medical' reasoning for the indiscriminate practice of 'active management of the placenta'. Examining the literature, one can conclusively establish that there are internal mechanisms of the body at play that have the natural tendency to expel the placenta from inside the mother's womb once the child has been delivered. However, the time required for nature to finish this process without human or 'medical' interventions cannot be definitively predicted as sometimes it may be complete within an hour whereas in other cases it may even take forty eight hours. Velpeau, writing in the nineteenth century, notes that it was unnecessary for the

practitioners to wait around that long for the placenta to be 'naturally' expelled when it could be 'managed' much faster through intervention (Velpeau 1854:). This would help in cutting down the long hours of labour that women had to endure along with the more important factor which was that the practitioner could be relieved of his duties much quicker. This kind of reasoning fits in perfectly well with the larger capitalist perception of the reproductive body as a machine and the birthing process within the hospital as an assembly line production of 'finished goods'. Within such a scheme of reasoning, the obstetrician is seen as the factory 'supervisor' or even the 'owner', who is the sole individual responsible for taking decisions regarding the 'production' process (Martin 1989: 57). Therefore, it is impossible for the attending practitioner to devote his undivided attention to each of his patients for such long hours. By 'managing' time, with the help of drugs to induce labour, the use of forceps so on and so forth, the obstetrician is able to ensure that he can pack in as many patients as possible, keeping in accordance with the mechanical metaphor that has come to shape not only reproduction, but every other aspect of human life.

The practice of clamping the cord immediately after birth has similar specious rationale driving it in the present day context. In the late eighteen century, the practice of severing the cord immediately after birth was propagated by Levret (1703-1780). Since then it has been the standard practice that has been followed unquestioningly by the medical fraternity. Throughout nineteenth century, although this was established mode of operating, practitioners differed from one another on when the clamping should actually occur. While some preferred to wait till the placenta was delivered, others thought it necessary to wait only till pulsations had ceased. The severing of the cord was also reliant on the condition of the uterus and the state of the placenta. Others, like Velpeau did not wait for any of these prerequisites to be fulfilled before the severing of the cord and proceeded to do so immediately upon birth. It was thought that separating the infant from the mother quickly after birth meant that it could be taken to a safer place and given dedicated attention. This has been one of the reasons extended for the perpetuation of this practice in the modern hospital setting which insists on keeping infants in a sterile and sanitized environment for the initial days of its lives, away from the mother. The rise of

neonatology as a distinct branch of medicine may have had similar impact on this practice. The most recent development has been the phenomenon of cord blood banking that has swept across the West, and is gradually making its way towards the 'developing' world. This can be seen as one of the key motives for early clamping of the cord. As has been explained in the second chapter, for a substantial amount of cord blood preservation, the draining of blood from within the cord into the infant needs to be prevented (Lancet). A flaccid placenta is therefore, detrimental for the cord blood harvesting industry and every effort is taken to prevent such an eventuality, knowing fully well that infants are being exposed to certain unnecessary risks because of premature cord clamping.

The direction that the science of obstetrics has taken is hardly dependant on unadulterated 'medical' factors, as I have shown in the above arguments. It shifted the focus from the woman to the convenience of the practitioner, a phenomenon which confronts us time and again in the analysis of the practice of obstetrics even now. One such instance will be the insistence on the use of the lithotomy position for delivering when it has been known for centuries that the most appropriate positions for delivering are the ones which allow pull of gravity to aid the expulsion of the child. Lithotomy is the preferred position since it is the most convenient for the doctor to 'catch' the child. The relationship between cord blood banking and premature cord clamping brings to the fore the relationship that exists between private enterprise and the discipline of obstetrics. Of late, cord blood banking as a business undertaking has had a deep impact on the practice of obstetrics with special reference to cord clamping and the third stage of labour, and only time will tell the kind of repercussions it has for the discipline in the future.

The field of medicine has never been devoid of influences from the 'outside' world. Even though its proponents may give the impression of being 'neutral' and unaffected by events that are occurring in the realms of politics, economics, religion and culture, the discipline is very much guided if not ruled by these 'external' factors. History has been witness to the surreptitious collaboration that existed between professionalized obstetrics in particular, the Church and the state. An instance of this can be seen even as early as the thirteenth century, when a witch hunt carried out by the state to execute midwives as their

presence was not only seen as an impediment to the development of a professionalized discipline of obstetrics but also since they were perceived as a potential threat to the Church because of the supposed possession of destructive magical powers. This alliance can be seen at work even in the present context of the abortion debate in America where state mechanisms act in tandem with conservative religious structures/organizations in order to frame policies to coerce women into giving up rights over their own bodies. With the growth of capitalist enterprises and the burgeoning of big pharmaceutical companies, the market economy exercises it own control over the discipline.

The more one delves into these questions, the hazier the epistemological basis for the prevalence of certain practices within the field of obstetrics becomes. My analysis of cord clamping and delivery of the placenta in modern medicine has shown that there was no reasoning at the cognitive level that could account for the preference of one set of practices over another. This forces me to widen the prism of analysis to include social and cultural factors that affected changes in the discipline in this respect. The purpose of my work thereby also draws attention to an alternative system of therapeutics and the practices of cord clamping and treatment of the placenta. The traditional systems of therapeutics on which childbirth practices in India are based, has been maligned as being an obstacle in the path of progress envisioned for the nation. The fact that this system does not even claim to operate in isolation from the social and cultural world, unlike its modern counterpart, is what adds to the messiness of this field. It is replete with the politics of caste, gender and class, yet its therapeutic value can by no means be contested.

In the Indian traditional systems of medicine, a delayed clamping of the umbilical cord is practiced universally. This is a fact that the cord is never cut until the placenta has been expelled out of the woman's body in these systems. This was practiced even in the times of Guillemeau, surgeon to King Henry IV, when the infant still attached to the placenta by the cord, would be taken near the fire place and the placenta would be rubbed on the belly of the infant in order to revive it. With the modernization of obstetrics, the conceptual construction of the placenta has undergone a major shift. Biomedicine conceptualizes the placenta as medical 'waste', whereas the practitioners of traditional

therapeutics in India look to placenta as a critical resource in the revival of stillborns. The placenta, providing nourishment to the fetus inside the mother's womb for nine months, has been dubbed as "other mother" and is treated with reverence and care. This is evident from the elaborate rituals and customs that accompany the disposal of the afterbirth.

The intrinsic conflict that operates in the institutionalization of modern science in general and obstetrics in particular, is primarily due to the denial of socio-cultural influences on the questions of epistemology. As mentioned earlier, matters pertaining to gender, class, religion, politics and economics have far reaching consequences on the profession of medicine. Such separation has its basis in the Cartesian duality of mind and body, followed by the post-Enlightenment principles rescuing the enterprise of science from the clutches of religion. This gave rise to the modern day misconception of a 'neutral' science. In traditional forms, this separation is clearly absent, both at an epistemic as well as practical level, and the rootedness of its therapeutic practices are celebrated by its practitioners. For this reason one does not find a conflict of the above mentioned variety within this system of knowledge.

I would also like to call attention to some of the problems that have confronted me while scrutinizing the implications of the traditional systems of therapeutics. By looking at the discipline of medicine as a cultural artifact, it becomes easier to decipher how the inequalities that afflict society are replicated within the practices as well. This is especially the case when it involves issues of gender and caste in the Indian context, as I have pointed out in the last chapter. All the practices, especially those involving birth and death, are marked off by a high degree of ritual pollution. This is evident in the fact that these rituals are supervised by those who are at the bottom of the caste hierarchy. There appears to be a deadlock when it comes to counterpoise the themes related to gender and caste with that of birthing practices as most scholarly writings on the area have revealed. While some scholars privilege gender emancipation and produce a reading of reality which does not do justice to the caste dimension, there are others who can be charged with doing the reverse. In the end, the specific arena of cord cutting and birth of the placenta that has major ramifications on not only caste and gender studies but also on a

critical study of therapeutics, has not received adequate attention in works on the anthropology of medicine. What then happens is that the evaluation of preexisting literature tends to get caught up in providing a critique for lacking either the gender or caste element, and an appraisal of the efficacy of the therapeutic aspects merely slip through the crevice. In this body of writing, it has been my fundamental endeavour to address issues of therapeutics which are often undermined, along with addressing issues relating to gender, caste and labour politics.

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