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Three viewpoints on the praxis and concepts of midwifery: Indian *dai*s, cosmopolitan obstetrics and Japanese *seitai*

Andréine Bel

This study is an attempt to compare practices of child delivery and related concepts of "assistance" as formulated by traditional midwives in India, conventional obstetricians and practitioners of the Japanese *seitai*. It is based on interviews conducted in India in 1997-98, substantiated by quotes of recent literature advocating "natural" birth attendance.

The present version has been revised in 2005 and a few remarks have been entered between square brackets. To complete the bibliography, I recommend readers to check the AFAR on-line database of medical literature for all keywords matching topics of this study: <http://afar.info/biblio-liens.htm>.

Keywords: child delivery, birthing practices, birth attendance, traditional midwifery, *dai*, *suin*, *shamin*, *seitai*, obstetrics, India.

Content

7. Observation by touching the cervix
8. Position for the delivery imposed on the mother
9. Controlled breathing of the mother, and efforts to bear down directed by the attendant
10. Cutting the cord immediately
11. Control of the timing for the mother to get up
12. Immediate breast-feeding and synthetic vitamin K
13. Control on the breastfeeding
14. Post-natal care for the baby

Eight usual interventions in case of complications

1. Amniotomy
2. Injection to induce or stimulate contractions
3. Pain-killers and epidural
4. Episiotomy
5. Vacuum/forceps
6. Caesarean section
7. Injection to induce the placenta
8. Postnatal resuscitation

Discussion of the technical aspects of this study

Is the hospital environment safer than home?
The six main causes of mortality and morbidity:

1. Anaemia
2. Haemorrhage
3. Eclampsia
4. Puerperal infections
5. Abortions
6. Complications in dystocic deliveries

A discussion of concepts underlying birth attendance

Transfer of responsibility versus self-reliance
Interventions
“Physiological” versus “pathological”; “normal” versus “natural”
Insufficiant advocacy of “natural birth”
The scientific status of modern medicine reconsidered

Dais and their communities in India

Unfitness to categorisation
Dais in the literature

The learning process

Competence, recognition and validation of knowledge

Inadequacy of medical coaching for the *dais*

Foreword

Exposure to the Japanese *seitai,* in the early 1970s provoked a radical change in my perception of "training" applied to human movement and "assistance" in the domain of health. This led me to reconsider common-sense views on learning processes, notably giving a second thought to the statement that "we know from being taught."

While studying dance with this reflexive turn of mind, I came across several techniques that offered rare glimpses of something I would call "unconstrained human motion." My search became that of *true* movement, a source of creativity unaffected by articulated thinking, far from the fashionable discourse on "body language."

In a similar way, I started grasping the creative power of regeneration in physiology and the implications of taking responsibility for one's health instead of surrendering it blindly to medical practitioners, official or so-called alternative.

My own experiment in unattended child delivery, in 1979, reinforced confidence in the resources and knowledge that the human body is able to call upon in crucial situations (Bel 2000).

None the less, advocating self-reliance in health matters should not be reduced to "training one's instinct" (a voluntary cumulative process) nor to a passive "return to Nature". The idea of Nature is all but a social construction, where instinct is wrapped together with fear of the abnormal, fear of madness or loss of identity.

To reactivate the potential of "body physiological wisdom" is a long way to go, as it implies changes of attitudes and worldviews on the sole basis of personal experience. This sensitisation process is known in *seitai* as "normalization of the ground". The reactivating of this potential may further become instrumental in developing skills and expertise of the individual in the domains of postural adjustment and human movement. In the context of *seitai* training, techniques are the outcome of self-learning processes rather than imitative procedures. They work as catalysts of regenerative and creative processes. Nevertheless, one should always keep in mind that these techniques do not work as substitutes for failing potentialities, as regenerative processes have their own limits. These limits delineate the borderline between physiology and pathology. Pathology is the domain of medical therapy.

My first encounter with Jagatap Dhura "Dharubai", a traditional midwife in Sawargaon village (Marathwada / Maharashtra, India) revived sensations I remembered from the time my child was born, seventeen years earlier (Bel A. & B., Poitevin & Rairkar 2002). I realised that many of the technical points and ideas raised by the midwife were consistent with *seitai* views.Yet, the same were ignored or discarded by conventional obstetrics. This urged me to undertake a systematic enquiry on childbirth practice in rural India.

My purpose is not to conduct an exhaustive survey of practitioners in a narrow geographic area. Instead, I am keen on collecting pieces of information that may prove helpful in highlighting the cognitive processes of the most experienced midwifes. Experience, in this context, means their ability to deal with unusual situations without resorting to medical intervention.

I have spent more than twelve years in India imbibing the customs, languages, attitudes and artistic representations of highly educated Indians. It took me a while to understand that my perception of Indian life and society had been shaped into the Brahmanical way of thinking pervading the Indian education system. This perception engineered by the intellectual, high-cast elite, has become the uniform pattern of *savoir vivre* in all strata of urban society. It projects a consensual and static vision of the social and cultural value systems in modern India.

Many studies about popular health practices follow a pattern that is dictated by the dominant medical system: their aim is to point out deficiencies and inconsistencies of these practices, and to suggest solutions for them to be rectified, monitored or simply eradicated. This is the common way of "top-down" development policies, usually flavoured with a so-called "participative" involvement of the beneficiaries. Rural midwives and healers who are not able to articulate their knowledge verbally and assert their role in the community have no chance of fighting for a place in this perfectly clean and smooth construction.

My background made me see the evidence that many traditional midwives might be the depositories of a wealth of knowledge which does not find a place in a modern medical environment. They shared with me new insights into the process of pregnancy and delivery, and better ways to interact with women at this crucial period of their life. This naturally incited me to look for the most knowledgeable informants.

It is significant to observe that this concern for high-quality information is rarely, if ever, applied to studies of popular practices. This reflects a cultural bias through which they are appraised as devoid of any content worth close scrutiny.

I am aware that my work methodology may not qualify as "scientific" in the quantitative-analytical framework of large scale surveys conducted by sociologists and development NGOs. None the less, this methodology is adopted by scholars involved in the study of art music and dance: look for the best informants and try to reconstruct their knowledge with reference to a domain of expertise that is closest to their world views. As to the art of midwives, the information is gauged against both *seitai* and conventional obstetrics. For this reason, Indian doctors and Western midwives have been involved as informants.

Background

I practised the fundamentals of *seitai* with Itsuo Tsuda (1914-1984) for ten years in France. Tsuda was trained by Haruchika Noguchi, the founder of the *seitai* school in Japan. He was also a *noh* theatre performer and a senior disciple of Morihei Ueshiba, the founder of *aikido,* a martial art. In France, he had studied sociology with Marcel Mauss and sinology with Marcel Granet.

H. Noguchi became known as a healer when still a child. He did an extensive study of traditional healing techniques available in early 20th century Japan and came up with the mind-boggling statement that humans should not depend on these techniques nor on any sort of therapy. In his view, the self-healing potential is intact in civilised humans even though it may be captive of inhibitory belief systems conveyed by education.

Noguchi's portrait is very remote from that of the caricatural faith healer so frequent in modern Japan. He was addicted to experimentation and conducted systematic observations on large groups of people before coming to any conclusion. He also relied on scientific instruments to check observations of body surface temperature, and chiropody measurements to classify the types of "energy polarisation" leading to unbalanced postures.

He designed an exercise — *katsugen undô* in Japanese — which Itsuo Tsuda translated as "regenerating movement" when he introduced it in France. The exercise consists in allowing non-voluntary movements to sensitise the body and resolve various physical and psychological tensions.

In the 1970s *katsugen undô* was recognised as an official relaxation technique by the Ministry of Education in Japan, and thereafter practised in many public schools.

Regenerating movement depends on the extra-pyramidal nervous system. It includes any non-voluntary movement that an ordinary conscious mind is able to modify or suppress at will, that we may call "semi-involuntary". These body expressions are "health keepers", facilitating the adaptation of the organism to its environment and lifestyle. They are experienced by everyone during "paradoxical" sleep, and in daily-life incidents such as sneezing, hiccup, yawning, laughing, crying, swinging... and birthing.

Every educational system prohibits some of these manifestations and tolerates other ones. Thus, pet dogs are lucky enough to be allowed to roll their backs on fresh grass whereas well-behaved parents restrain their babies from jerking on their chairs.

The basic technique in *seitai* is the practice of *yuki.* It is the art of exercising the "fullness of *Ki*". Unlike faith healing, *yuki* is performed with no curative intention and no magic formula prompting a supernatural power. It does not fit in well with explanatory theories either: few humans would seek the rationale for laying their hand on a pet cat purring with pleasure on their knees...

In other words, *yuki* is close to a qualitative experience in non-verbal communication, as suggested by its relation with "*ki,*" one of the most popular and migratory concepts in Japanese culture (Tsuda 1973).

When I was pregnant, Itsuo Tsuda taught me a few technical points on child delivery according to the *seitai* technique. These points will be made explicit in this paper. In Spring 1979 I came to Paris to meet Frédérick Leboyer, the author of the provocative book *Pour une*

naissance sans violence (Leboyer 1980, 1995). I decided not to deliver my child in the "Leboyer clinic" near my home, a pale imitation of his practice. I chose to give birth at home with the sole assistance of Bernard, my husband.

The remarks and conclusions of this paper are influenced by my own experience as well as testimonies of women following the *seitai* approach in France in the late 1970s. [After exchanging many reflections in discussion lists and meetings with parents who experienced undisturbed births over the past 5 years, I have come to the conclusion that *seitai* recommendations may turn normative, as any system of thinking about childbirth, unless they are reviewed critically.]

Scope

To gain a clear picture of the current practices in child delivery, India is certainly a privileged field of study. Public hospitals and private clinics compete with local initiatives based on a passive resistance to cosmopolitan medicine. People with little exposure to the commodities of modern life exercise their right to give birth at home, by themselves, with a family member or with the help of a traditional midwife, according to their own feeling and to the beliefs of the community (Bel A. & B., Poitevin & Rairkar 2002). Allopathy, the mainstream, goes along with the *ayurvedic, siddha* and *unani* traditional medicines recognised by the State. (The term "traditional" in this paper is used to designate knowledge acquired within the community, unlike the one transmitted by formal education.)

Dai is the Hindi terminology for a midwife and will be used in this text as a generic word. In Maharashtra, midwives are called *suin,* and in Bihar, *shamin.* Most of them are also healers or associate with experts in herbs or magic.

In 1997-98, I interviewed *dai*s from villages in Maharashtra and Bihar. I introduced myself both as a self-made researcher doing a comparative study on child-delivery and as a "local healer" developing ways for self-reliance in health care. I also mentioned my dance training, which proved of great help in understanding non-verbal responses to the interview.

In Gomiya, Bihar, I first met a group of twenty-three *shamin*s who were interviewed during an encounter organised by *Matrika* (Delhi) founded by Janet Chawla, and *Mahila Sangriti Kendra* (Gomiya) directed by Sister Pilar. A year later, I came back to interview the midwife whom I had felt was the most experienced.

In Maharashtra, I interviewed eight *suin*s in different regions and villages, to whom I had been introduced by animators of *Village Community Development Association* (Pune, <http://vcda.ws>) with the help of Guy Poitevin and Hema Rairkar (Bel A. & B., Poitevin & Rairkar 2002). Colleen Edmonds, a family doctor from Canada accompanied me to a village. Her reactions to what she witnessed during the interview were of great relevance to me.

During my second visit to Gomiya, in April 1998, I got to know Diane Smith, a Canadian midwife directing a ten-day workshop with local midwives. This workshop, organised by Sister Pilar, was an opportunity for us to get into a thorough description of their experiences and know-how, which we analysed together in a dialogue-like interaction with the informants. A delivery also took place during our stay, and I assisted Diane. In Delhi I had a long discussion with Abha Bhaya (Jagori) who helped me clarify views on popular healers.

In the meantime, I had thoroughly interviewed two obstetricians from Pondicherry and one gynaecologist from Pune, all of them with very different perceptions of "natural" delivery. One paediatrician from Delhi living in London reacted to the first draft of this paper and her critical remarks have been taken into consideration. Any reference to "doctors" in this text relates to practitioners applying "conventional" obstetrics.

I designed a rudimentary questionnaire and refined it after each interview (see *Questionnaire for dais and doctors*, <http://bioethics.ws/dais/daiquest.htm>), but I used it in two different ways. With doctors, I saved time following the English questionnaire systematically, as their practice is well defined, standardised and they feel at ease when replying to questions. However, with *dai*s I soon realised that time was a crucial parameter of communication. I was attentive to following their own way of looking at things, their priorities. I hoped my interference would give fresh impetus to the dialogue and allow its flow. Therefore I filled out the questionnaire only after the encounter. The results of all interviews are stored in a computer database.

In villages I had interpreters, and at times my knowledge of Hindi was sufficient.

An overview of the study

This study is in three parts. The first part is technical as it describes the various interventions in childbirth attendance, for both normal and complicated cases.

The second part is a discussion of technical and conceptual aspects underlying birth attendance.

The third part focuses on the social context of midwifery practice in rural India and leads to suggestions for positive changes in the practice and status of traditional midwives.

Limitations of this study

The limitations I encountered in all these interviews were in the domain of language, along with the perceptions of *dai*s' technique and of themselves in front of me. There were many layers of translation both ways:

- local languages vs English and vice versa,
- indigenous vs outsider,
- Indian vs foreigner,
- villager vs city dweller,
- gestures and know-how vs articulated words,
- supposed and expected questions-answers to genuinely spontaneous ones.

Indeed, the only chance to get around uncertainties created by such communication gaps would be the next stage of this study: to assist or witness deliveries conducted by *dai*s and doctors. Gestures are less open to misinterpretation than words.

This study should not remain limited to India. Many places in the world share skills that would be complementary and relevant to the growing concern and actual knowledge in "less-interventionist" midwifery.

Fourteen usual interventions in normal cases

(See *Questionnaire for dais and doctors*, <http://bioethics.ws/dais/daiquest.htm>)

Justification and side-effects of fourteen interventions, according to:

- MED> allopathy
- DAI> *dai*s, women or traditional systems
- SEITAI> *seitai*
- PERS> my own experience and observations
- REM> general remarks on these statements, and references to other sources

1. Antenatal checking and care

MED> Obstetricians give extreme importance to medical check up during pregnancy with the aim of foreseeing and preventing any complication. It is claimed that auscultations are more and more precise and less and less invasive thanks to advanced technology, although some of them are recognised to be at risk. It allows both the doctor and the mother to be prepared and secure before the delivery.

DAI> *Dai*s say that they usually intervene only when the delivery takes place. However, when the pregnant woman belongs to the same village, the checking is on a day-to-day basis.

SEITAI> During pregnancy, the mother's and father's sensitisation and instinct are increased. A sensitised woman is able to capture subtle inner messages that prompt immediate reactions to the situation. This compensates or completes check-ups that would only highlight deviations from "normality". The preparation consists essentially in the mother listening to her body and mind's needs, through her sensations: sleep, diet, movement or immobility, rest or activity, socialisation or need of isolation etc. In assessing her own needs, the mother is able to readjust her response in a very sensitive way, which no formal knowledge would be able to achieve.

PERS > The need of sleep was compulsory for the three first months. Morning sickness guided me on what to avoid: food with chemicals, artificial perfumes, loneliness, exhaustion.

One massage point was shown to me by a bonesetter in Auvergne (France) , by a *seitai* expert, and by one of the most experienced *dai* that I interviewed. Sometimes, the mother feels uncomfortable after the seventh month. The foetus may have difficulty in adjusting to a space becoming narrow. Then, the mother massages lightly with two fingers, in a slow circular motion, a spot on the left side of her belly: the third point of an equilateral triangle, the base of which would be the line going from the pubis to the navel. I used this massage a few times after travelling or dance practice, always with the same amazing result: the baby would immediately respond by taking a more comfortable place.

REM> In my dialogue with the *dai*s, the fact that they did not seem to place much importance on antenatal checking surprised me a lot. One reason might be that India has a "birthing culture". Women are conversant with pregnancy, delivery and feeding from a very young age (Stork 1986). Pregnant women usually feel confident and get support from other women. They do not rely so much on *dai*s' advice.

Today's medical antenatal checking and diagnosis have their own inherent risks:

- The risk of abortion through amniocentesis is approximately 1/100.
- Ultrasound screening has become a routine practice at the discretion of the parents, but its risks are currently under scrutiny.
- Medical check-up has its own limitations. When it shows a deviation from accepted norms, doctors may unnecessarily worry the future mother and resort to intrusive check-up.

The Lancet (12/12/1997) published a report of 15 studies. They compared electronic monitoring using a continuous graph of the baby's heart pulsation with intermittent auscultation, by portable Doppler or the wooden stethoscope. All 15 studies arrived at the same conclusion: the monitoring had a single constant and significant effect on statistics, to increase the percentage of caesarean sections.

Odent cites *The New-England Journal of Medicine,* 16 September 1993 as reporting that there is no statistical difference in perinatal results between pregnancies checked by routine ultrasound screening and those that are not. In (Odent 1994b: 31) he writes:

> Antenatal scare
>
> I constantly receive phone calls from pregnant women who are in a state of anxiety, even panic, after an antenatal visit. I usually reassure them by transmitting the sort of hard data that is easy to find at the age of evidence-based medicine. Having analyzed the most common reasons for these phone calls, I have realized that in general, ignorance is the basis of the widespread *nocebo* effect of antenatal "care". Most practitioners seem to be unable to scan the abundant medical literature for valuable epidemiological studies. I found that this sort of blindness is related to a deep rooted cultural misunderstanding of one of the most vital functions of the placenta, that is the placenta as an advocate of the baby: the placenta is constantly manipulating maternal physiology for fetal benefit. The placenta can send messages to the mother via hormones such as HCG or Human Placental Lactogen. It is as if the placenta is telling the mother, for example: "please dilute your blood and make it more fluid, so that it can more easily go where it is urgently needed". The placenta can also ask the mother: "please, increase your blood pressure because we need more blood". It can also tell the mother about an increased need for glucose: this leads to a transitory modification of the metabolism of carbohydrates. The results of epidemiological studies are eloquent reminders of these functions of the placenta.
>
> Let us illustrate these interpretations by looking at three main reasons for panicky phone calls after a prenatal visit.
>
> First example: "my haemoglobin is 9: I am anaemic"
>
> When a woman has a haemoglobin concentration in the region of 9.0 or 9.5 at the end of her pregnancy, there are two possibilities. More often than not she will meet a practitioner (doctor or midwife) who is not interested in epidemiological studies and who thinks that iron deficiency in pregnancy can be detected via the haemoglobin concentration. She will be told that she is anaemic and she will be given iron tablets. She will understand that there is something wrong in her body that needs to be corrected.

It can happen, on the other hand, that a pregnant woman with a similar haemoglobin concentration meets a practitioner who is aware of the most significant epidemiological studies and who is interested in placental physiology. This practitioner has digested the huge and authoritative study by a London team about the relation between maternal haemoglobin concentration and birth outcomes (1). Birth outcomes of 153,602 pregnancies were analysed (the haemoglobulin measurement used in the study was the lowest recorded during pregnancy). They found that the highest average birth weight was in the group of women who had a haemoglobin concentration between 8.5 and 9.5. Their main conclusion was that "the magnitude of the fall in haemogloblin concentration is related to birth weight". A similar pattern occurred in all ethnic groups. Furthermore it appeared that when the haemoglobin concentration fails to fall below 10.5, there is an increased risk of low birth weight and preterm delivery. Similar conclusions have been reached by other, yet smaller, epidemiological studies (2,3). This sort of practitioner is also probably aware of the many studies that fail to demonstrate that iron supplementation may improve birth outcomes (4). When such a practitioner suspects anaemia, he or she prescribes specific tests such as erythrocyte protoporphyrin, transferrine saturation or serum ferritin.

The pregnant woman who has access to this evidence-based antenatal advice will be offered reassuring explanations. It will be explained that the blood volume of a pregnant woman is supposed to increase dramatically, and that the haemoglobulin concentration indicates the degree of blood dilution. She will understand that the results of her tests are suggestive of effective placental activity and that her body is responding correctly to the instructions given by the placenta. She will be given good news. The antenatal visit will have had a positive effect on her emotional state and therefore on the growth and development of her baby.

All over the world millions of pregnant women are wrongly told that they are anaemic and are given iron supplements. There is a tendency to overlook the side effects of iron (constipation, diarrhoea, heartburns, etc., plus the fact that iron inhibits the absorption of such an important growth factor as zinc (5). [...]

A lack of interest in placental physiology is at the root of such misinterpretations. There is a tendency to confuse a transitory physiological response (blood dilution) with a disease (anaemia). Obstetrics is dangerous when it is not evidence-based.

Second example: "They are giving me drugs to treat my high blood pressure".
In late pregnancy many women have an increased blood pressure. Once more there are two possibilities. More often than not this will be presented as bad news. What's more, certain women will be given antihypertensive drugs. The message is that there is something wrong that needs to be corrected.

However there are practitioners who will not present an increased blood pressure as bad news. These practitioners can perceive and explain the fundamental differences between a gestational hypertension ("pregnancy-induced hypertension") as a physiological response and the disease pre-eclampsia. They can easily offer a reassuring analogy such as: "when you have a brain tumour, you have a headache; but when you have a headache it does not mean that you have a brain tumour". In the same way when you have pre-eclampsia you have a high blood pressure, but an increased blood pressure in

late pregnancy does not mean pre-eclampsia. The explanations given by such practitioners are supported by several epidemiological studies. The most significant study from this regard is an examination of perinatal mortality over two years in the obstetric population at the Nottingham City Hospital (8). It demonstrated clearly that the best possible outcomes are among women with gestational hypertension compared with the overall population and, of course, compared with the pre-eclamptic women. Similar results, with smaller numbers, have been presented by Naeye (9), by Kilpatrick (10) and by Curtis (11).

The misinterpretations of the fluctuations of blood pressure in pregnancy are as widespread as the misinterpretations of the fluctuations of haemoglobin concentrations. A recent review article identified 45 controlled trials that randomly allocated women with mild-to-moderate hypertension to antihypertensive treatment (12). This endless repetition of studies has been called "circular epidemiology". Of course the main effects of an antihypertensive treatment during pregnancy is to restrict fetal growth and to increase the number of low weight babies. Practitioners who have understood placental physiology would not even think of treating with drugs what is a physiological response and would anticipate the dangers.

Third example: "I am diabetic!"

Many practitioners do not realize how powerful the *nocebo* effect of the term "gestational diabetes" can be! When a woman is given this diagnosis she tends to confuse what is a transitory response to fetal needs with a serious chronic disease. Such a term can transform overnight a happy pregnant woman into a sick person. The point is that this diagnosis is useless. Professor John Jarrett, from London, claims that gestational diabetes is a "non-entity" (13). In a letter to the American Journal of Obstetrics and Gynecology it has been called "a diagnosis still looking for a disease". Today there is a debate on whether pregnant women should be screened for glucose tolerance (14). This diagnosis is useless because, when it has been established, it leads to simple recommendations that should be given to all pregnant women, such as: avoid pure sugar (soft drinks, etc.); prefer complex carbohydrates (pasta, bread, rice, etc.); have a sufficient amount of physical exercises.

We could write volumes about the *nocebo* effects of antenatal care. Three examples were enough to measure the amplitude of an intriguing phenomenon that is basically the same all over the world. An overview of the Primal Health Data Bank gives an opportunity to realize how serious this topic is.

{* Aide à la traduction : texte similaire en français par Michel Odent (2001) :

J'ai réalisé qu'à l'origine d'un véritable effet nocebo, il y a presque toujours une méconnaissance profonde de la littérature médicale. Mon rôle se limite le plus souvent à rassurer, en m'appuyant sur des études publiées dans des journaux qui font autorité. Voici quelques exemples fréquents d'appels de futures mamans angoissées.

Certains états émotionnels de la femme enceinte peuvent influencer la croissance et le développement du bébé dans l'utérus.

“Mon taux d’hémoglobine est de 9 : je suis anémique.” Rappelons que l’hémoglobine est le pigment des globules rouges. Quand une femme a un taux d’hémoglobine d’environ 9.0 ou 9.5 à la fin de sa grossesse, on lui dit, le plus souvent à tort, qu’elle est anémique et on lui donne des suppléments de fer. Or, dire à une future mère en parfaite santé qu’elle a besoin d’une prescription de fer pour corriger des déséquilibres dans son organisme, c’est altérer, et parfois profondément, son état émotionnel. Une telle attitude témoigne bien d’une méconnaissance de la littérature médicale. Une énorme étude britannique, disposant des dossiers concernant la naissance de plus de 150 000 bébés, s’était fixé pour objectif d’évaluer les taux idéaux d’hémoglobine en cours de grossesse. La principale conclusion de cette étude est qu’un taux de l’ordre de 9.0 ou 9.5 va de pair avec un bon pronostic. Par contre, lorsque l’organisme maternel répond mal à la demande du foetus et du placenta et ne parvient pas à abaisser son taux d’hémoglobine en dessous de 10.5, c’est mauvais signe. Les risques de prématurité, de poids insuffisant à la naissance ou de maladies de fin de grossesse (telles que les pré-éclampsies) sont accrus. D’autres études épidémiologiques ont abouti à des conclusions voisines.

Pour les praticiens, le premier devoir devrait être de protéger l’état émotionnel des femmes enceintes

Bien que de telles données aient été publiées dans des journaux d’audience internationale, partout dans le monde des millions de femmes sont déclarées anémiques et reçoivent des prescriptions de fer[, alors même que les tests spécifiques susceptibles de déceler les carences en fer et les anémies n’ont pas été demandés][[Il y a une tendance à sous-estimer les effets secondaires du fer (constipation, diarrhée, pyrosis etc.), en plus du fait que le fer inhibe l’absorption d’un élément essentiel à la croissance, le zinc.]] [...]

Ce mystérieux phénomène collectif a pour véritable origine un profond désintérêt pour les fonctions du placenta. L’un des rôles du placenta est de constamment manipuler la physiologie maternelle pour le bénéfice du foetus. Le placenta “parle” à l’organisme maternel au moyen d’hormones. Il joue le rôle de l’avocat du bébé. Ainsi le placenta “demande” à la mère de diluer son sang et ainsi de le rendre plus fluide. Il en résulte une augmentation du volume sanguin qui peut atteindre 40%. Ceci explique que lorsqu’on mesure, dans le sang d’une femme enceinte, la concentration d’une substance telle que l’hémoglobine, on évalue avant tout le processus de dilution, c’est à dire l’activité du placenta. Il est aisément prévisible que cette concentration, qui est de l’ordre de 12 à 13 (g/dl) en dehors de la grossesse, s’abaissera chez la femme enceinte en fonction du degré de dilution du sang. Voici ce que disent des praticiens avertis à une femme enceinte dont le taux d’hémoglobine est de 9.0 ou 9.5 : “Bonne nouvelle ! Le placenta fait bien son travail et votre sang est convenablement dilué”.

“Je suis diabétique !” C’est la deuxième phrase type prononcée par beaucoup de femmes enceintes. De nombreux praticiens ne réalisent pas à quel point l’expression “diabète gestationnel” peut avoir un effet nocebo. Un tel diagnostic conduit à confondre une sérieuse maladie chronique avec ce qui n’est habituellement qu’une réaction physiologique transitoire. Il peut du jour au demain installer dans la maladie une femme qui était auparavant heureuse et se sentait en parfaite santé. De nombreux médecins ont souligné que ce diagnostic est inutile. On a d’ailleurs pu dire que le diabète gestationnel est un “diagnostic à la recherche d’une maladie”. Le Professeur Jarrett, de Londres, dit que c’est une “non-entité” (6). Une étude très importante, à l’échelle de la population

canadienne, a révélé que le recours systématique aux tests destinés à déceler des diabètes gestationnels n'améliore en aucune façon les statistiques (7) et n'a donc aucune raison d'être. Le diagnostique est inutile dans la mesure où les seules recommandations pratiques qu'il entraîne habituellement sont d'éviter les sucres purs (boissons sucrées, bonbons, etc.) de préférer les hydrates de carbones complexes (pâtes, pain, riz, etc.) et aussi d'avoir une activité physique régulière. Pas besoin de tests compliqués pour aboutir à de telles recommandations, qui sont d'ailleurs valables pour toutes les femmes enceintes.

Là encore il y a une discordance entre les données publiées dans la littérature médicale et les pratiques quotidiennes. Là encore cette discordance a pour origine profonde un désintérêt quasi culturel pour les fonctions du placenta. Le placenta fait savoir à la mère que le bébé en développement a besoin de plus de sucre. En d'autres termes, il demande à l'organisme maternel de modifier son métabolisme des hydrates de carbone. Exceptionnellement, le conflit peut aboutir à une véritable maladie. Dans l'immense majorité des cas, , la réponse de l'organisme maternel à la demande du placenta ne dépasse pas le cadre des réactions physiologiques. L'organisme maternel contrôle la situation. Il n'y a pas de symptômes. Seul un test de laboratoire qui consiste à donner artificiellement à la mère un excès de sucre permet de déceler une augmentation inhabituelle du taux de glucose sanguin (c'est ce que les médecins appellent une hyperglycémie provoquée).

"On m'a prescrit un médicament pour abaisser ma tension artérielle". C'est mon troisième exemple, tout aussi courant. Il est très fréquent que le placenta demande simplement à la mère d'envoyer plus de sang. Alors, l'organisme maternel augmente sa pression artérielle. Les résultats de toute une série d'études sont convergents, qui confirment qu'une augmentation isolée de la pression artérielle en cours de grossesse va de pair avec de bonnes statistiques (8,9,10,11) Malheureusement, de nombreux praticiens présentent la simple augmentation de la pression artérielle en cours de grossesse comme une mauvaise nouvelle. Ils la considèrent même parfois comme une maladie qu'il faut traiter par des médicaments. Une revue de 45 études publiées a révélé que les seuls effets d'un traitement anti-hypertensif pendant la grossesse étaient d'inhiber la croissance du foetus et d'augmenter le nombre de bébés de petit poids (12). Les praticiens qui s'intéressent à la physiologie du placenta étaient en mesure d'anticiper les dangers de tels traitements. Beaucoup confondent l'hypertension isolée de la grossesse avec cette maladie qu'est la pré-éclampsie. Certes lors d'une pré-éclampsie, il y a une augmentation de la pression artérielle, mais il y a aussi des protéines dans les urines et un certain nombre de perturbations métaboliques. Par comparaison, on pourrait dire que lorsqu'on a une tumeur au cerveau, on a mal à la tête mais que lorsqu'on a mal à la tête, cela ne signifie pas que l'on a une tumeur au cerveau...

Le recours systématique à des technologies sophistiqués est presque toujours générateur de nouvelles angoisses et fait de la grossesse un phénomène pathologique.

De nombreux autres exemples pourraient rendre compte de l'ampleur de ce phénomène inquiétant et quasi universel. J'ai simplement cherché à analyser les situations les plus fréquentes et les plus préoccupantes. }

2. Calcium, iron and vitamin tablets given to the mother during pregnancy

MED> Poor general nutrition, low haemoglobin, etc., justify this kind of food supplement, even though a proper diet would be preferred by the doctors.

DAI> *Dai*s advise only good nourishment when the mother can afford it. They say that a woman placed in a viable environment will assimilate what is needed for her pregnancy. There is enough in nature to provide her with everything, even with simple means.

SEITAI> The mother can trust her sensations and instinct, which has nothing to do with greed or gluttony.

REM> Calcium, iron and vitamin tablets work as artificial "doping", and may not be assimilated in a proper way by the organism.

Nesse & Williams' study (1994) adds new data to Odent's question about iron supplementation. Low iron helps fighting infection.

> Iron is a crucial and scarce resource for bacteria, and their hosts have evolved a wide variety of mechanisms to keep them from getting it.[...]It became clear in the 1970s that low iron levels associated with disease could be helpful, not harmful, but even now, Kluger and his associates find that only 11 percent of physicians and 6 percent of pharmacists know that iron supplementation may harm patients who have infections. (Nesse & Williams 1994: 30)

In developing countries concerned with poor food intake and chronic lack of hygiene, there is strong advocacy for iron supplementation in pregnant women.

One could study, develop and utilise ancient knowledge pertaining to healthy diet, survival and prevention of disorders. Growing sprouts, dissolved egg shell in lemon juice, spices, herbs and berries are benevolent for mineral and vitamin assimilation, are less expensive, more effective and available remedies. In India, *tulsi* (Indian basilicum), *nîm* (melia azedarach), fenugreek, hibiscus, papaya seeds, *curcuma*, ginger, cinnamon, cardamom, cloves, mustard etc. are daily cooked or used as health keepers to enhance the quality of life. These are part of domestic Indian culture and promote self-reliance in health matters. Still, more and more people now prefer chemical pills to take care of their health.

The craving of certain women in villages for eating clay is their instinct telling them they require minerals. Medicinal clay is known for mineral balance and the regeneration and cleaning of blood and tissues (Dextreit 1987, 1993).

Poor general nutrition concerns rich people as well. The main causes are excess of (unbalanced) food, chemical fertilisers, pollution and stress, leading to non-assimilation and subsequent demineralisation, avitaminose, etc. For them, substitutes are also of no avail. One should discover and treat the root cause of non-assimilation instead of forcing the body to absorb what it no longer wants. Medical dependency is more important among the privileged.

3. Anti tetanus injection and sterilisation of the environment

MED> The routine way to deal with infections is to give anti-tetanus injection as a prevention and antibiotics as a cure. The whole set-up of the delivery is comparable to the aseptic site of surgical operations. The pubic hair of the parturient is shaved and her vagina sterilised.

DAI> *Dai*s take care of hygiene. It includes sterilisation by fire of the cutting tool and the washing of hands. Herbal cures will easily manage tears if any.

SEITAI> A few *seitai* techniques may help the body to fight benign infections only.

REM> Allopathy came late to hygiene awareness.

> Around 1850, Ygnaz Semmelweis, a medical doctor in Wien noticed that, in the obstetrical rooms visited by professors and students immediately after their anatomy works, the percentage of mortality among women having delivered could exceed 20%. He advised his colleagues and students to wash their hands with soap and rinse them in water with lemon, before and after each auscultation. These recommendations provoked hue and cry. Disregarding a measure which had taken down the percentage of mortality to 2%, he was thrown out of the hospital. The presentation of his findings to the Wien medical society encountered nothing but hostility. Women continued to die after deliveries.
> (Bouhours 1990:134)

[At the time of this study, none of my medical informants mentioned nosocomial infections, a major concern of modern obstetrical units. Further, it would be necessary to extend the discussion to pathologies such as strepto B, AIDS, hepatitis C, blood incompatibility etc., for which there is no prevention in the *dai* or *seitai* approaches. Allopathy and medical care remain the only acceptable tools for dealing with these situations.]

4. Setting up the environment

MED> An Indian hospital or clinic will usually provide a narrow table with stirrups in a fully lighted room, monitoring equipment, oxygen supply, etc. At the time of the delivery, the parturient is normally kept immobile in lithotomy position by electronic monitoring belts and perfusion IVs. She is under the authority and responsibility of the doctor till she returns home. Her husband or mother may be present in some cases. Nobody else is allowed

DAI> In the traditional Indian home, a room is prepared for giving birth. It has been cleaned and contains a bed, a few utensils and a cradle. Semi-darkness is recommended. In the village, a fire is set by the men outside the house to boil water and sterilise the cutter. Children play around. The mother or mother-in-law, and/or skilled women help and sing. When called, the *dai* accompanies the delivery. The future mother may decide at the any moment to go to the hospital, if transportation is available.

SEITAI> *Seitai* concerns self-determination and self-responsibility, be it in hospital, in birthing centres or at home. Privacy and a feeling of security against any kind of disturbance allow the mother to concentrate on what she is doing. Strong light, noise, negative thoughts and irrelevant talk should not reach the parturient. Timing should never be viewed as a relevant factor.

PERS> I delivered my baby at home with closed curtains and open windows, in our bedroom. Only my husband assisted me, in a non-intrusive way. I was aware that the whole process was taken care of by the involuntary and “semi-involuntary” system of my organism.

REM> Michel Odent (1998) pointed out that when a woman gives birth, mainly her ancient brain (the paleocortex: hypothalamus, hypophyses, etc.) is solicited. When inhibitions come, they come from the neocortex, where intellectual activities take place. Neocortex is stimulated by language (and precise questions), luminosity, a sensation of being scrutinised, and a feeling of danger. All these stimulations interfere with the process of the delivery and release of the placenta.

A homely room is sometimes reconstructed inside the hospital, as was the case at Pithiviers near Paris, where the parturient was allowed to deliver in a normal bed, with a private bathroom allowing two persons for delivery in water, dim light and a quiet atmosphere with doctors making themselves as invisible as possible (Odent 1994a).

Results speak for themselves. In Pithiviers, the perinatal mortality was about 10 per thousand in 1976, against an average of 20 per thousand in France (ibid.). Fifteen years later, in the 84 centres for birth ("home-like" clinics) in the USA, infant mortality came down to 1.3 per thousand, and maternal mortality to 0 per thousand versus the usual 9 per thousand (Harper 1994:58).

In recent studies, the impact of the physical and psychological environment during a delivery is more and more put into balance with the gain supposed to be brought by medical conditioning.

In the Netherlands it has been shown that:

> Once at hospital, even in the flexible system of the polyclinics, women are more likely to undergo medical interventions than at home. (Akrich & Pasveer 1996:158; see also Wiegers et al. 1996)

5. Massages

MED> Indian doctors agree that massages are useful. They also admit that they usually do not practice them.

DAI> *Dai*s claim that through massage they can avoid most of the complications of the delivery. They start massaging back, belly and limbs from the beginning of the labour to indirectly set the baby into proper place if needed, to lessen the pain, to stimulate contractions when it is felt necessary, and to make the mother and the child feel good. The massage and warming of the vulva outlet with oil at the last stage of the delivery is made to avoid tearing and facilitate the delivery.

SEITAI> No particular indication was given regarding massaging, which is left to spontaneity, intimacy and feelings.

REM> Massage is part of the cultural heritage of India (Stork 1986). Wherever systematised, it may become invasive. Scientific evidence (1404 homebirths in the USA) showed that perineal massage during delivery is associated with perineal trauma. (Aikins Murphy & Feinland 1998).

6. Fumigation, fomentation, compresse, poultice, application

MED> Indian doctors still in contact with their culture appreciate these simple ways of curing. They recognise that they unwillingly discard them, as these do not fit any more with the modern and Western-oriented obstetrical set-up.

DAI> *Dai*s and Indian women are acknowledged experts in using these traditional remedies, part of the "hidden knowledge" of domestic life. They relax and comfort the parturient, release her pain and facilitate labour, give warmth and elasticity to the pelvic tissues, and prevent mother and child from haemorrhage and infection.

Fumigation and hot compresses are used as a medicinal dry heat bath. In some villages in Maharashtra for example, women use a mixture of *vavding* (embelia ribes), *ajowan* seeds (bishop weed) and garlic peel placed on incandescent embers. The woman squats above the fumes, nude under her *dothi* (underskirt) that falls all around her.

Fomentation, hot water, warm mud on the back and hips, hot poultice of *nîm*, or salty water, warm oil or turmeric application with salt, etc., are used to prevent and/or heal eventual wounds, haemorrhage and infection.

SEITAI> Sensitive techniques of baths regulate the inner temperatures and recover elasticity of the body. These are based on the traditional techniques of a Japanese bath. They are usually taken two times, the second dip being in warmer water. They concern just hands, or feet, or feet and legs, or the whole body.

REM> Ethno-doctors and ethno-pharmacologists are gathering knowledge about natural cures with a particular focus on medicinal herbs.

Nowadays, chemists extract what is supposed to be the active molecules within certain chemically recognised medicinal plants. They can synthesize these molecules at will, and make a standard medicine. Their arguments are that the plant is protected from being plucked, and the consumer is sure to find exactly the same composition from one pill to the other. The fact remains that in such standard medicine nothing is left of the original and complex medicinal herb.

In contrast, domestic knowledge is a living art. In the household, the use of medicinal plants is restricted to common weeds that have been known and experienced for generations by a given community. Water, sun, heat, soil, fumes and cooking ingredients are used to the best of their potential.

7. Observation by touching of the cervix

MED> Vaginal touch guides the obstetrician or the midwife in appreciating the development of each step of the delivery and in conducting or eventually rectifying it. It has become a necessity to hospitals for time management, when many deliveries are announced at the same time. According to doctors, the cervical touch has no side effects whatsoever.

DAI> Most *dai*s routinely use this technique. A few of them claim to use it as little as possible. Only one old *dai* in Maharashtra insisted that no vaginal intrusion should be made, since it would disturb the natural process of the delivery.

SEITAI> The vaginal touch may provoke a reflex-contraction of the cervix and the baby retracts upwards. It may introduce pathological germs near the cervix, even in a sterilised environment.

PERS> I did not feel any need for self-auscultation.

REM> In unattended births, women may feel empowered by this autonomous act, allowing themselves to combine internal sensations with an objective evaluation of labour progression.

In the medical approach, vaginal touch has become an art in itself, delineating the obstetrical skill. [Though in countries such as the UK it is no longer practised without the patient's request or consent, it remains a routine practice in France despite scientific evidence denying its benefit.] It is often perceived by women as an invasive, disturbing, painful or humiliating intervention.

A small number of Western midwives prefer to practice without vaginal touch. They feel better guided by external touch of the belly, the parturient's sounds and breathing patterns, change of positions and movements, flows of temperature, verbal exchange etc. They have altogether a different approach to delivery, encouraging a dialogue and partnership with women.

8. Position for the delivery imposed on the mother

MED> Labour is longer and more painful in supine position (even with flexed knees as in lithotomy), but this inconvenience cannot be avoided. A maximum of visibility is needed by the midwife or the obstetrician. When used, the monitoring of the baby's heart and perfusion make immobility an obligation.

DAI> *Dai*s and women, when not influenced by obstetrics, allow the parturient to move and find her own positions during the whole delivery: half-sitting, squatting, hanging, kneeling or posing the anal area on the bent knee of somebody sitting on the ground, and so on.

SEITAI> The woman finds the right position by herself, evolving along with the different stages of the delivery. Each woman has specific positions suiting her own type of constitution and enabling her to deliver with a minimum of pain. This avoids complications such as exhaustion, dystocia, tearing and the baby's suffocation.

PERS> I found my own positions after trying a variety of different postures. The pain calmed down immediately. Whenever I slightly changed the right position, unbearable pain would immediately come back. No expert of any kind would have influenced me with advice.

Midwives allow themselves to suggest positions to the parturient while she gives birth. For me, the only physiological positions are the ones spontaneously adopted by the woman.

REM> Roberto Caldero-Barcia, former president of the International Association of Obstetricians and Gynaecologists, says:

> Except from being hanged by the feet, the supine position is the worst conceivable position for labor and delivery. (Harper 1994:18)

Scientific evidence and midwifery experience support this view by pointing to two major side effects: (1) foetal distress caused by the compression of the mother's vena cava (Balaskas 1992: 176), and (2) an increased risk of perineal tears (Murray, Keirse et al. 1998: 291-ff).

Many doctors in India wish to revise this attitude towards supine position and allow more flexibility. They have the definite sensation that this habit has been induced by a Western way of life and it does not fit their own culture.

9. Controlled breathing of the mother, and efforts to bear down directed by the attendant

MED> "The mother needs support and the best method is to help her with control of her breathing and bearing down." Focusing her attention away from labour pain makes her relax, especially with inexperienced women who may panic.

DAI> Expert *dai*s take care of the psyche of the parturient right from the beginning of the delivery. The cultural set-up of the delivery and the care for good community relations are expected to put things in such a way that no panic occurs out of pain or anxiety. *Dai*s consider that breathing and bearing down should be solicited from a woman only when she is panicking, as a way to pacify her, or if the progression is too slow according to them.

SEITAI> When free to develop, the breathing accompanying the bearing down of the parturient belongs to "semi-involuntary" movements of the body. It is extremely complex and accurate in helping the baby's progression.

PERS> In my experience, the breathing techniques taught in clinics to prepare pregnant women for the so-called "painless delivery" were a caricature of the diverse and remarkably elaborated types of breathing which took place when I allowed things to go their own way.

Yogic respiration, chanting and deep relaxation tend to take control over the spontaneous process and, when thoroughly applied during delivery, they may work to such an extent that contractions will stop. We heard about a yoga teacher who had been so occupied to get relaxation during contractions with the help of *pranayama,* that the contractions stopped for good. She ended up in the emergency ward of a hospital, with a blue suffocated baby extracted by vacuum.

In contrast, "semi-involuntary" movements come from the extra-pyramidal nervous system. Involuntary and "semi-involuntary" processes take care of the reserve of energy available, direct the progression of the foetus properly, and induce beneficial positions and movements. They can transmute the feared pain into a tremendous pleasure of creation that might resemble orgasm.

REM> Directed breathing finds its justification only in the context of active management of labour. Dependency on artificial conditions makes it normal to resort to directed breathing. Willpower, prerogatives and beliefs can be as instrumental as any other interference in creating further problems.

10. Cutting the cord immediately

MED> Doctors I interviewed prefer to cut the cord within two or three minutes of the birth. They do not see the point in waiting any longer. Doctors fear polycythemia if the placenta blood goes to the baby.

The infant may become polycythaemic [when blood becomes tacky and does not circulate well due to an excess number of red blood cells], a complication associated with blood hyperviscosity and hyperbilirubinaemia (significant jaundice). (Dunn 2005).

DAI> All *dai*s wait for the placenta to be expelled before cutting the cord. When the baby is born, he is left a few minutes where the mother lies, between her legs or beside her (and not on her chest, which would put him higher than the placenta), till the placenta comes out. Doing so, the mother facilitates an extra supply of oxygen towards the baby who smoothly receives the blood of the placenta. They never found any inconvenience in doing so.

[*Dai*s never mentioned the practice named "Lotus birth", whereby the intact cord is allowed to dry and break by itself linking the placenta to the baby for 3 to 5 days, though it would be a good way to avoid infections.]

SEITAI> *Seitai* insists that the cord should be cut any time after the blood stops beating inside the cord, which may take 10 minutes or more.

REM> Leboyer (1980) explains the importance of allowing the baby to continue breathing via both cord and lungs, till the cord does not beat any more. The oxygenation of the brain is therefore doubly ensured at the time of the shift. The burning sensation of the lungs is reduced to almost nothing.

The argument that "late cord clamping" might increase the incidence of polycythemia is not confirmed by scientific data (Nelle et al. 1996).

> In 1993, Kinmond and her colleagues noted that heterologous blood transfusion may be virtually avoided in preemies of 27 to 33 weeks by lowering the child 20 cm below the placenta for 30 seconds before clamping the cord. This gravity-enhanced method of placental transfusion produced healthier babies needing fewer blood draws and no heterologous transfusions.
>
> Kinmond et al. found no increased jaundice, plethora, hyperviscosity, or polycythemia using this method. Yet fear of late clamping persists because physicians have been conditioned to believe that these complications are caused by placental over-transfusion. Cord stripping has become tantamount to malpractice.
>
> (Morley 1998)

[Despite this evidence, early blood clamping is still routinely practised in hospitals. At present it is even required for the collection of blood cord, containing blood-forming stem cells. Dunn (2005) shows the detrimental effects of this practice:

> During passage through the birth canal, a transfer of blood takes place from the baby to the placenta. This fetoplacental transfusion blood, together with a portion of the normal placental blood volume, then returns to the baby following delivery, and has an important role to play in normal adaptation.

> But early cord occlusion interrupts this process, trapping around 100 ml more blood in the placenta than would be the case if cord-clamping were deferred until cord pulsation had ceased. As 100 ml of blood in the term fetus is equivalent to 2.5 pints [1.4 l.] of blood in an adult, it is not surprising to observe that, following immediate cord occlusion, the newborn infant typically exhibits signs of hypovolaemia (too-low blood volume due to excess fluid loss) and hypotension (an excessively low blood pressure).
>
> The International Federation of Gynecology and Obstetrics (FIGO) Committee for the Ethical Aspects of Human Reproduction and Women's Health considered the ethical aspects of cord-blood collection at their meeting in Cairo in 1998. Their conclusion was as follows: "The information mothers currently receive at the time of requesting consent (for the collection of umbilical cord blood) is that blood in the placenta is no longer of use to the baby and this 'waste blood' may help to save another person's life. This information is incomplete and does not permit informed consent. Early clamping of the umbilical cord following vaginal delivery is likely to deprive the newborn infant of at least a third of its normal circulating blood volume, and it will also cause a haemodynamic disturbance. These factors may result in serious morbidity."]

11. Control of the timing for the mother to get up

MED> The parturient is induced to get up rather soon as doctors fear stagnation of the blood, haemorrhage or thrombosis.

DAI> Many *dai*s encourage the woman to get up soon, if she feels all right. Two helpers make her stand against a wall, arms raised, and the midwife massages her belly from down to up with the top of her head. Then, she ties a long and large belt, tight around her waist and hips. The mother will keep this belt for many days or weeks, till she feels that she is fine.

I met only one *dai* in Maharashtra who knew about the iliac wings opening and was careful with their closing before having the woman get up. One of the two doctors in Pondicherry, sympathetic to the know-how of *dai*s, added that the "hips" were closing one after the other.

SEITAI> The two iliac wings — not only the pelvic bones — open slightly during the pregnancy and delivery. After the baby is born, they slowly close one after the other, in three periods.

1) The first closing happens just after birth. The effort of the hips to close can be checked by thermometers placed under each armpit. The temperature gets higher on the side of the hip, which closes. After delivery, the time to get up comes when the two temperatures are equal for the third time (equal, one up, equal, the opposite side up, equal). This may take between a few hours to a few days, depending on the constitution of the woman and her way of life. Lactation is facilitated when the right timing for getting up is respected.

The mother "knows" when it is time for her to stand. She feels an irresistible need to get up and walk.

Sitting or getting up after the delivery freezes the hips in whatever position they are in. If the hips have enough time to close, the mother will soon recover and be healthy. If the hips

remain open or asymmetric, risks are there on the long term of prolapsed uterus, accelerated ageing, depression or obesity.

2) The consolidation itself starts only at the beginning of the third week after birth. The hips close partially one after another for the second time.

3) The beginning of the fifth week marks the last closing. At this period of time, the mother should not carry heavy loads. The risk would be is of loosing weight or having no more milk. After this last closing, the hips have taken the position they had before birth. They are consolidated, and the mother feels stable as before.

If ever hips are bloqued before regaining there symetry and closure, they can recover it again after appropriate manual therapy or...another delivery!

PERS> It took me four days after the birth before I felt the urge to stand: I have narrow hips, and despite being a dancer, the flexibility of my hips was reduced. During these four days, I did not sit, or even get up for the toilet. My testimony of this experience has been reported by Tsuda (1980:77-79).

REM> Cranial osteopaths often state that asymmetry in the hips is the root cause of a number of problems and diseases, as it affects the spine and organs.

12. Immediate breast-feeding and synthetic vitamin K given to the baby

MED> According to WHO, breast-feeding should start within half an hour of the birth. Beyond one or two hours, the baby loses the reflex of sucking for approximately 40 hours. New-borns will benefit from early feeding of colostrum, especially in case of under-nourishment. The extraordinary depurative quality and richness of colostrum help the expulsion of the meconium and provides for the needs of the baby. Its antibodies protect the organism against microbes, virus or any foreign living cells (Odent 1990: 95-122). The sucking of nipples activates in the mother the contraction of the uterus, facilitating the expulsion of placenta and preventing haemorrhage. Plus it facilitates lactation. Synthetic vitamin K may be given to the baby to protect him against haemorrhage risks. Rich food is recommended to the mother.

DAI> Two or three days are estimated the usual delay before breast-feeding, giving time for the baby to be hungry while the mother's breast gets "ready". In the meantime, water with *jaggery* (sugarcane molasses), or with goat milk, or/and natural honey is usually given in small quantities to the baby, adapted to his thirst. The mother takes light food during this period of time, avoiding aliment "giving cold".

*Dai*s and traditional people I interviewed knew the importance of colostrum for the newborn.

Women report that colostrum is inappropriate (only) during the first two or three days because it "causes diarrhoea and nausea for the baby".

SEITAI> *Seitai* recommends that the colostrum should be given preferably once the intestine is free of meconium, which might take two or three days. The baby is given water with a few drops of lemon or goat milk or pure honey in the meantime. Besides, vernix nourishes him through his skin.

The expulsion of the placenta is facilitated by a security sens given to the mother and the child.

Retraction of the uterus is facilitated by bed rest and the mother's getting up at the proper time. The bonding between mother/father and child is protected in its intimacy.

PERS> I observed that the reflex of sucking came first, much before the feeling of hunger. My baby would suck my finger if I would caress his lips, whereas hunger and acceptance of breast milk came only on the third day, after the meconium had been fully expelled. I got similar testimonies from several friends delivering unattended at home.

I did not feel a strong need for eating and drinking during the first three days. I was still in the bliss of birth — full of its hormones — and taking full rest.

REM> A misinterpretation of facts and beliefs is that colostrum, according to the Indian (and more or less universal) customs, "needs to be thrown away" (Odent 1990: 101; 2002: 98, 103).

The most that I could gather as direct testimonies during the thirteen years of my stay in India was "a few drops thrown on the ground to nourish Mother Earth".

This assertion is also not corroborated by NGO studies. Vaidya Smita Bajpai (1996: 135) published the result of a large survey covering eleven states in India. More than 2000 women participated collecting information, many of them from remote rural and tribal areas, along with 25 field-based NGOs and 22 ayurvedic physicians. On this delicate subject of colostrum, Sadgopal resumes:

> By and large, the first milk is considered heavy for the new born to digest, but it is generally not removed as this study suggests. When breastfeeding starts on the second or third day, the colostrum may be more digestable, and the baby gets it.

Why such a misinterpretation?

Ethnological reports (e.g. Van Hollen 2003: 179-180, in South India) associate the custom of delayed breastfeeding with the belief that colostrum is "polluting".

Colostrum (*khîs* in Hindi or *pîyusha* in Sanskrit) is considered to be powerfully and magically dangerous, just as menstrual blood, birth and midwives, all of them equally qualified as "impure". The concept of purity/impurity and pollution needs to be carefully scrutinised, especially in the context of childbirth, and it should not be biased by a reconstruction of the shastric (written, male dominant) tradition underlying both traditional conservative and Orientalist views (Chawla 1994).

Bajpai further writes (1996: 135):

> The *shaastras* do not mention discarding *peeyusha*, nor do they recommend giving it during the first three days of birth. *Peeyusha* is thick, viscous and heavy to digest. It solidifies when heated. The newborn may have difficulty, sucking or digesting it during the first or second day. It can be easily digested when the baby is put to breast on the fourth day.

The idea of "pollution" is confusing because it locks a few days experience into the straight jacket of universal categories imposed by highbrow culture. Thus, the factual observation (of diarrhoea and nausea) is obliterated by a religious-social creed. In turn, anthropologists and scholars tend to globalize beliefs under the general category of "colostrum taboo" which they support with inaccurate library information and conclusions copied from each other (see for instance Odent 1990; Vincent Priya 1992; Harper 1994; Chawla 1994...). The lack of methodology for dissociating facts, folk views and written traditions, when it comes to perinatality and childcare, has been pointed out by Stork (1986:14), who advocated a careful analysis of visual records and first-hand testimonies.

Where does the contradiction lie?

I do not see a contradiction between scientific findings about the virtues of colostrum and a "universal negative attitude towards it" (Odent 1990: 106), if restricted to three days at most. The best ingredient should be absorbed in proper time. All examples of "colostrum taboo" cited by Odent (as lactation consultant for WHO) concern populations for which breast-feeding was and still is necessary for survival. These proved to be successful in facilitating prolonged breast-feeding. Industrial countries, on the other hand, need to counteract the disastrous effects of a nursing practice in which artificial milk has been forced on women.

To recommend immediate breastfeeding is certainly an improvement in such an appalling situation.

I feel concerned about this advocacy to communities who have everything to teach us concerning lactation. After a long period of commercial colonisation during which artificial feeding was pushed on the Third World in tune with the Western fashion, we are facing a neo-colonialist/normative globalization of birth cultures. Medical experts (from NGOs and State) are again coming on the stage to teach backward communities the "natural" way of breast-feeding!

[This attitude reflects a behavioural pattern that is rarely questioned in the academic world. Tierney (2002) set the house on fire with respect to the Amazon. Van Hollen's thesis does the same for India. The author quotes a doctor from IPP-V Thousand Lights Corporation Hospital, in Madras (Van Hollen 2003: 166):

> « This is a "baby friendly" hospital, you see. So, we are insisting that these women give mother's milk as soon as the baby is born. And we force them to eat some nutritious food right away. The women who come here are mostly illiterates, you see. So they don't know what is best for them. They have very superstitious beliefs and will starve the mother and the baby for three days after the delivery. Women will do what they are told while they are here on the board (delivery table). It is after they go home that the problems begin. »

When convenient, these communities and their "superstitions" are made responsible for the decline of breast-feeding that had been induced to them at the first stage. For instance, Van Hollen reports (2003: 180):

> Within the MCH (Maternal-Child Health, Tamil Nadu state) development discourse, concern over the refusal to give newborns colostrum was part and parcel of a general anxiety about a perceived global decrease in breastfeeding.]

It is worth trying to understand local customs, rather than speculating on the "genetic selection" performed by "colostrum deprivation" hypothesized by ethnologist Margaret Mead (1955). Along a similar line of thought, Odent (1999: 23) suggests that "rituals and beliefs disturbing the birth process" have worked as a selective process beneficial to aggressive human groups, accordingly the only ones able to survive.

[These assertions of competitive processes, being the sole driving force of human evolution (and social Darwinism, its latest achievement), are not supported by recent trends in biology (e.g. Amzallag 2003); cooperative and co-evolutionary processes have been proved to play a crucial role in adaptations to changes in the environment.]

I would like to propose a key to understanding this custom, common to Japanese *seitai*, Indian *dai*s, and almost every pre-industrial society. It was explained to me by Itsuo Tsuda:

> If meconium is in the intestine, colostrum will provoke its elimination through diarrhea and get eliminated in the same time, thereby loosing part of its beneficial effect. Conversely, if colostrum — which is still there when the baby takes the breast at one, two or three days of life — reaches an intestine that is free of meconium, it remains longer in the intestine and gets time to be fully absorbed by the organism. The baby's natural resistance and immunity are thus reinforced.
>
> In the meantime, the initial introduction of a small quantity of a foreign element (water with honey or/and a few drops of milk or lemon) induces the natural formation of vitamin K as a first acclimatation of the baby's digestive system to the outer world.

All this well considered, it seems to me that the best person to know when to breast-feed first is the baby himself. Many babies need immediate comfort and reassurance besides nutriment, and breast-feeding remains the best way to produce a soothing effect on baby and mother. The immediate sucking reflex allows such babies to be nourished just after birth. Sucking stimulates and "prepares" mother's breast if needed.

Mothers I interviewed in rural India all agreed that if their baby feels like taking the breast immediately after birth, they would indeed feed them, regardless of any beliefs and customs. Otherwise, baby and mother take their time. The first sucking reflex disappears until baby gets hungry and mother's breast ready.

In 1999, veteran midwife Suzanne de Béarn pointed out (personal communication) that the recommendation of early breast-feeding generates a hysterical climate detrimental to babies and mothers who would otherwise rely on their own sensations.

13. Control on the breastfeeding

MED> Is it necessary for the mother to willingly establish regularity in the rhythm of the baby's life? This interventionism is coming out of fashion. In Indian hospitals babies are usually fed on demand. At the age of six months as an average, the milk diet is progressively supplemented with flour, vegetables, row eggs etc. In most cases, the timing of complete weaning is decided by the mother only if and when circumstances prove necessary.

DAI> *Dai*s and Indian mothers cannot even imagine feeding the baby other than according to his wishes. Mothers wait for the baby's demand before supplementing his diet. Complete weaning takes place when the child wants it, or because of another pregnancy or compulsion.

SEITAI> Imposed timing of meals form an intrusion in the complex auto-regulation of the newborn's digestive system. It may induce later digestive and psychological disorders.

The baby himself signals as to when and how to feed. It is up to the mother to be eager to receive these signals.

The baby is ready to take food in addition to mother's milk when his head does not automatically follow his shoulders, but stays in the direction where his eyes are focused. He starts pointing at desired food with his finger. Most of the time, he first accepts animal products and fruits. Later, he relishes root vegetables (potatoes, carrots etc.), then aerial vegetables (salad, tomatoes etc.). Cereals are taken only after eight months, as they are difficult to digest and would put a newborn baby to sleep more than usual.

A well-fed baby has the inner sides of the thighs supple and elastic. If they are floppy, the baby may be well-fleshed and good-looking, but he is not well-nourished.

Weaning should take place when the baby refuses the breast, which he might do only once. If the signal is not perceived by the mother, the child may keep on demanding breast-feeding for many years, without ever deciding to stop.

PERS> It was worth seeing our six-month old son sucking vigorously on large pieces of roasted (organic) beef, which his saliva would dissolve quite easily!

REM> The baby's instinct is intact and expresses its needs very clearly. In order to understand, trust and satisfy these needs, one has to get rid of preconceived ideas and conditionings.

Ness & Williams (1995) provide clues that might explain the baby's choices during mixed feeding, as observed by *seitai.* After mother's milk, the nearest food is animal product (raw egg, cheese, yoghourt, meat etc.). Once accustomed to it, the baby goes to the least toxic food available. Even free from chemicals, vegetables growing from the earth contain natural toxins to keep away predators. Less toxic are fruits since they are meant to be eaten and seeds or stones abandoned on the ground. Next, root vegetables, as they are less exposed to predators than the aerial ones. When vegetables are cultivated with chemicals, the underground ones absorb more toxic material than the aerial ones if they are treated from the ground, and less if they are treated from the aerial part of the plant, as it is the case of potatoes. This might explain why many children hate vegetables except potatoes!

14. Post-natal care for the baby

MED> Besides immediate aspiration of the mucus from the mouth and/or nose of the new-born, the eyes are cleaned with saline solution or sterilised by silver nitrate solution or penicillin ophthalmic ointment as soon as the head is out. After the cord is cut the baby is examined to determine if there are any abnormalities. Then he is washed, sometimes with soap or cleaned with oil (as in some Indian hospitals) and dried. He is weighed, measured,

clothed and given daily baths. The baby is placed in nursery when convenient to the mother or the medical staff.

DAI> Removal by finger of the mucus is done only in case of obstruction of the nose.

After the placenta is “born” and the cord cut, the baby is washed with warm water, his eyes cleaned in the processand most of the vernix is removed in the process. He is dried, clothed and kept by the mother from whom he has not been separated, even a moment.

The nude baby will be given a daily morning sunbath, with his head protected from the rays, for a few minutes at a time to strengthen him. Mustard or sesame oil in winter, and coconut oil in summer will generally be used for elaborate massages. They relax him, develop his nervous system and correct birth traumas. The main fontanel and ears are specially taken care of, by directing oil with fingers towards them. Before sleeping, a warm water bath will regulate his energy and medicinal herbal or bark fumigation will protect him against infections and diseases. The mother and child are protected from the outside by partial isolation for a certain period of time lasting about 20 days. This is the usual period of “impurity” which secludes child and mother in the Indian context. At the origin a Brahmanical notion condemned in a single voice by feminists, NGOs and intellectuals (see Chawla 1994), the menstrual and birth impurity has variable and intricate meanings for different communities (Van Hollen 2003).

Though dictated by taboo, this seclusion may work as a protection with respect to a given environment. It is one of the rare occasions for a daughter-in-law to take rest in front of her mother-in-law. During this period of time she is given a particular type of food prepared by other women of her community for the sake of protecting the fondling of mother and baby. If possible, she will have *suntewada* (dry ginger powder) mixed with sugar and *ghî* (clarified butter), and ingredients facilitating digestion and assimilation such as *carvi*, garlic chutney, etc. She is regularly massaged, bathed as her child, either with *nîm* water warmed under the sun, or with the decoction of the bark of *babul* tree (acacia Arabica). Everyday she is given a fumigation bath of medicinal wood and herbs for her perineum to quickly recover its elasticity and tonus.

SEITAI> The vernix should be preserved as much as possible. It protects the baby against skin irritation and changes of temperature. It also nourishes him through the skin and allows him to wait quietly for the meconium to be expelled before taking the breast.

The baby’s adaptation to the external world through the five senses should be achieved progressively, at his biological rhythm. Light, sounds and touch should be adapted to the baby’s reactions and development. His and his parents’ skin fragrance should not be modified.

Sensitive observation may favourably complete APGAR score and weighing scale results, giving only rough and standard information. When lifted, a relaxed baby seems to be heavy, whatever his real weight is. If the baby seems light, it may be the sign of a disturbed or shocked state. The way he moves and interacts, the colour, texture and smell of his skin, the firmness of the inner sides of his thighs, the brightness of his eyes and the strength of his neck and of his grasp, all give precious indications that parents often detect before any medical expert.

Mother and child should be protected from external disturbances for about six months, till the baby expresses interest in the "outside world".

PERS> We felt that his first bath just after birth was rather useless and disturbing. It depends on babies, births, atmosphere and on the parents' skills in giving a bath. The vernix was preserved. I washed his eyes with my tongue going between the eyelids. I gave him daily baths after the remaining cord detached itself, and massages after three weeks.

REM> During the international symposium on prenatal and perinatal psychology, in 1989 in Jerusalem, Marsden Wagner, a consultant at WHO said:

> I am convinced the procedure of placing all new-born babies in one room is the biggest mistake of modern medicine. [The nursery is] a cradle of germs, separating babies from their mothers at the most sensitive point of their relationship. (Harper 1994:81)

Vernix allows the baby to keep his natural smell facilitating the bonding with parents in a home-like environment. Mothers sometimes feel the need to lick some of the vernix with their tongue.

Silver nitrate, still in use at times, is extremely painful for the baby, and according to naturopaths and even some allopaths, dangerous for his sight later. Lemon juice in the eyes, prescribed by some naturopaths, is also extremely painful... Besides saliva, a single drop of colostrum is the best and painless to clean babies' eyes.

Eight usual interventions in case of complications

The complications with increasingly invasive interventions are studied here.

1. Amniotomy

MED> Amniotomy allows the doctors to see the colour of the liquid sooner and determine whether the baby is in distress, when they have doubts. It can be performed as a routine to precipitate or accelerate the delivery. Others consider that it should be done only on strict medical necessity. Prophylactic antibiotheraphy is then systematically given.

DAI> *Dai*s usually think that amniotomy makes the delivery more difficult, painful and dangerous.

SEITAI> For *seitai,* the braking of water bag happens spontaneously when child and mother are physiologically ready.

REM> Prolapse of the cord and dystocia are to be feared after amniotomy. In the case of "prolonged labour", this intervention often leads to inducing contractions with oxytocin as any important delay would be considered dangerous.

2. Injection to induce or stimulate contractions

MED> Beside some urgent medical reasons, most cases of artificial stimulation occur because the progression of the foetus is said to fail ... or the time management of the structure requires it.

DAI> For *dai*s, a well-conducted delivery is synonym to patience and does not normally require the induction of contractions. Nevertheless, *dai*s sometimes induce or stimulate contractions, according to their evaluation of the situation. They give a strong decoction of black pepper with *gur* (non refined cane sugar) to the woman, or place root of *rui* (*gossypium herbaceum*) in her hair and massage her. They may also advise her to put the end of her hair in her throat, in order to provoke contractions through the vomiting reflex.

SEITAI> Spontaneous rhythm of the delivery implies rather long periods of rest or sleep with no strong contractions, in order to restore forces for mother and child. Many dystociae would go unnoticed if time and freedom of movement were restored to the mother.

Stimulation by *yuki* and/or massage of certain specific points might help the progression, if the mother feels and expresses the need.

REM> An environment perceived as foreign and hostile, anxiety expressed or suggested by the attendants, intrusive, painful and repeated touches of the cervix to check the progression of the baby are common and cumulative causes of non-progression.

> In all research on physiological deliveries, it has been found that failure of the progression equates to a failure of the attendant's patience. (Harper 1996:67)

Inducing contractions for reasons other than medical is often done at the cost of both mother and baby's health. Contractions become unbearable contractures for the mother as well as for the foetus. Still the "active management of labour" is a routine in most hospitals all over the world. For economical reasons deliveries must be scheduled according to the constraints of staff management.

The use of oxytocins demands a monitoring of the foetus' heart, for which the mother is prompted to lie down on her back. All this makes the delivery more painful and difficult.

Village doctors in India and trained *dais* currently give injections of oxytocin to hasten labour. Rupture of the womb, cervix or vagina is then to be feared in the absence of cautious medical supervision that is only possible in hospitals.

3. Pain-killers and epidural

MED> They may be prescribed on medical indications or administered at the request of the parturient. Their side effects on mother and child are perceived as minor compared to their potential advantages: no pain, no cries, no tensions. Painkillers have become a necessary ingredient of the "package" in active management of labour.

DAI> *Dai*s give specific massages, hot baths for the lower back and fumigations for perineum which take care of the pain.

SEITAI> A major cause of pain is an incorrect position of the foetus and/or of his mother.

PERS> My experience is that a careful observance of the body's needs lessens the pain and facilitates labour progression. Adapted positions, comfortable temperature, dim light and serene atmosphere contribute to the natural inflows of endorphines.

REM> The "epidural age" marked the end of "physiological birth". All steps towards the rehabilitation of spontaneous and undisturbed birth have been ruined by the promotion of medical drugs as the sole response to pain. Initially a claim of feminists, artificial pain relief became a commodity for medical teams. Mothers become spectators of their own deliveries. They feel safe and relaxed to the point of being able to watch TV or have casual conversations during their labour.

What is the other side of the picture? Painkillers are working against self-reliance. The mother becomes unable to detect abnormality and to react to it by taking the positions that would suit her and the progression of her baby. Her body requires external guidance at every stage, notably for pushing, which increases the incidence of dystocia and instrumental deliveries.

Mother's and baby's health may also be affected (Goer 1995: 250-273).

Harper (1994) gives the following accounts:

> In 1961, thalidomide was the first tranquilliser to proving that the placenta is permeable to toxins. Drugs, medical or not, cigarettes, alcohol and micro-waves are now officially considered dangerous for the mother and the foetus. In 1996, 70% of the deliveries happened with epidural analgesia in France, as opposed to 15% in the Netherlands. The short and long-term side-effects of pain-killers and anaesthetics on the foetus have been assessed by epidemiological studies.
>
> All drugs used in obstetrics are toxic for babies. Recent studies on babies whose mothers received obstetrical drugs for pain relief demonstrated a variety of adverse effects, including damage to the central nervous system; impaired sensory and motor responses; reduced ability to process and respond to incoming stimuli; interference with feeding, sucking, and rooting responses; lower scores on tests of infant development; and increased irritability. (Harper 1994: 73)

Research has been done in Sweden to study on children the long-term effects of drugs administered to their mother during the delivery. The young drug addicts who were surveyed present a strong correlation between their consumption habits and the quantity and type of the drug given to their mother at the time of their birth (Jacobson et al. 1990).

The point is not to choose between enduring labour pain and suppressing it with drugs. Once physical causes (such as inadequate postures and disturbance of the parturient) have been removed, the pain may decrease considerably, to a level at which it exerts a particular function, favorable in the birthing process.

According to Michel Odent,

> When one does not take medication, the body defends itself naturally and with efficacy against the pain. It provokes the secretion of endorphins which favour the maturation of the lungs in the foetus and play a role in the occurrence of lactation and in the mother-child attachment. (Akrich & Pasweer 1996:143)

4. Episiotomy

MED> Doctors claim that they avoid the tearing of the perineum by cutting it before it tears, and ensure a fine closure with stitches. Some perform episiotomy almost systematically for primiparous women. It is said to prevent further problems of infection and loose vaginal closure. Episiotomy is generally associated with vacuum and forceps extractions. It requires prophylactic antibiotics.

DAI> *Dai*s avoid tearing by allowing the woman to move and take the positions that she feels best suited. They lubricate, warm and stretch the vaginal tissues by massaging them with oil. When the head appears, the *dai* maintains the perineum with both her hands or feet while sitting on the bed. If any tearing occurs, she employs fumigation, hot compresses of decoction using leaves of *nîm* (*melia azedarach*), seeds of *bari-saunf (foeniculum vulgare*) or roots (turmeric with salt).

SEITAI> Tearing can usually be avoided if the mother allows herself to move and take the different positions that she feels right to her, along with the progression of the baby. Her breathing and pushes should remain involuntary and spontaneous, not subject to constraints of time.

REM> Natural oxytocin increases the elasticity of tissues during the whole pregnancy and even more during the delivery.

The antinomy between scientific evidence and medical practice is radical concerning episiotomy (Graham 1997). While episiotomy may hasten the delivery for a few minutes in case of foetal distress, there is not one single study supporting that prophylactic episiotomy would be of any benefit to the mother (Goer 1995: 275-293). [In 2004, Sweden has the best rate of intact perineum with an episiotomy rate of less than 6%, in contrast with France that is still far behind with a 50% episiotomy rate.] Nor would it minimize trauma to the foetal head (Murray, Marc et al. 1998: 295).

Episiotomy increases the risks of haemorrhage, infection, abscess, serious tears, plus a possible loss of anal tonus or fistulae. It has a possible negative effect on sexuality, as pain or numbness may be resented from a few weeks to months or years. It may be termed a genital mutilation following WHO's latest definition (Fact sheet N°241).

Studies show that a cut needs more time and has more difficulties in healing than a tear. Incidentally, tearing is nowadays used instead of deep cutting in caesarean sections.

[A compilation of scientific data on episiotomy is available on the AFAR website <http://afar.info>.]

5. Vacuum/forceps

MED> These instruments allow to force the passage when mother and child are not responding sufficiently to spontaneous or provoked stimulation. Side effects can be numerous and traumatic, notably in the hands of non-experts.

DAI> *Dai*s never use forceps. In the cases where they recognise not being able to manage, they send the parturient to the hospital, ending up with cesarian section most of the time.

SEITAI> No comment.

REM> As mentioned above, the growing incidence of vacuum/forceps is parallel to the one of epidurals. Lithotomy position, amniotomy and acceleration of labour are also correlated with instrumental deliveries.

Cranial osteopaths speak of the possibly life-long physical and psychological trauma left by forceps and vacuum unless osteopathic manipulations have been practiced in time to cure the damage (Lalauze-Pol 2003).

6. Caesarean section

MED> In case of twins, foeto-pelvic disproportion, dystocia, previous section, foetal distress, disease of mother or child, the mother being too aged or too weak etc., caesarean section is said to be indispensable. Short and long-term side effects are acknowledged as similar to any major surgical intervention, on the physical and psychological levels.

DAI> Each of the *dai*s I interviewed recognises her own limitations. Some cannot deal with certain types of dystocia, especially transverse presentation, others with abnormalities of the maternal soft parts like tumours and so on, others with the abortion of dead foetus. In such cases, the *dai* sends the woman to the hospital whenever possible. It is the woman's wish (and her family's) that is followed. Most of the time, the *dai* is asked to accompany her to the hospital.

However, on the whole, *dai*s with 20 to 30 years' experience always seem to have a "new trick in their pocket" in order to avoid caesarean section. One of them, for example, reported to me having dreams before such or such delivery, suggesting both problems and their solutions. The long habit of self-reliance and time-proved solutions make them aware of all available possibilities when facing danger.

SEITAI> No comment.

REM> WHO calls for a reduction of the percentage of caesarean sections, as they lead to an increase of the maternal mortality. WHO estimates that when hospitals have a percentage superior to 10%, they interfere too often in the process of the delivery (Harper, 1994).

In spite of this recommendation, caesareans in Brasilia represent 70% to 80% of the deliveries, more than 50% in large Indian cities, 14 % in France, and approximately 1% in planned homebirth practice.

[Caesarean rates are increasing in all industrial countries, while elective caesarean is strongly advocated by a few practitioners.]

7. Injection to induce the placenta.

MED> If the placenta is retained for more than 20 minutes the twin danger of haemorrhage and sepsis may result. Oxytocin and methods of expressing the placenta by massage and external pushes are used, or the intern manual intervention.

DAI> If the placenta does not emerge after about half an hour, women in India often induce contractions by putting the end of their hair in their throat. The vomiting spasm may expel the placenta. Alternatively they drink concentrated pepper tea, or the attendant slowly massages their abdomen with the fist, gently pulling the cord out while doing this massage.

Many *dai*s I met detach the placenta inside the uterus by hand, unwilling to wait more than ten to twenty minutes. They claim to avoid possible infection and heavy haemorrhage by the use of medicinal herbs and massage.

Only a few of them know and apply the same non-invasive technique as in *seitai,* described in the following paragraph.

SEITAI> After the cord stops pulsating, when the baby breathes smoothly having received most of the blood of the placenta, the remaining blood in the cord may be pushed back to the mother by pressure of the cord between the thumb and index finger. The gesture goes from the baby to his placenta, inflating its capillaries again. This has the effect of cutting the capillaries attaching the placenta to the uterus, and provoking its safe detachment. Spontaneous contractions evacuate the placenta a few minutes later. The placenta is received, not dragged out.

PERS> We took our time. Once the bath was given, we pressed the non-pulsating cord between our fingers towards the placenta. We could not estimate the quantity of blood that was still in the cord, nor whether the manipulation had any effect on the placenta. Nevertheless, the placenta came out by itself a few minutes later, thirty minutes after the birth.

REM> Non-interventionist midwives of my friends observed that, most of the time, the placenta detaches itself quite quickly, though it remains in the uterus without causing any serious bleeding or alarming symptoms. For some time, the uterus seems under the natural "anaesthesia" of the birth, while the woman gets deeply involved with her new-born, serene and eager to meet, to fondle and comfort him. She needs to feel ready before experiencing the contractions again and "allowing the placenta to leave her". She needs to accept the emptiness in her womb that results from the birth. If this pause is respected, at some point the woman feels uncomfortable with the placenta still in her. She then experiences the need to move to the vertical, in any flexed position, and the detached placenta will pop out easily, marking the end of the delivery.

More than any technique aimed at controlling the delivery of placenta, patience seems a key word, especially if no internal auscultation has been done during the delivery. We have testimonies of several hours and even several days (a person with handicapped hips) allowing the placenta to be ejected spontaneously and safely. In 1858, the average delay was estimated at 1-2 hours by a medical authority in France, whereas it has been reduced to 20 minutes in present-day protocols (see <perinatalite.chez.tiscali.fr/placenta.htm>). Any precipitation or forceful manipulation may cause damage, either to the placenta or to the womb, which in turn leads to further complications. Prolapse of the genital organs may result in the long term from these aggressive manipulations of the uterus.

The fear itself of retention of the placenta might be invasive. In the Indian context, the rate of maternal deaths due to haemorrhage of the deliverance is appalling. In my opinion, the routine practice of some *dai*s extracting the placenta by hand reveals a misunderstanding of the physiological process. Further I believe that this practice might have been induced by medical

influence and an increasing feeling of urgency instilled by expectant mothers and their relatives: the faster the better.

This third stage of labour is the one during which privacy and feeling of security are most required for the mother and child. The reason lies in the fact that expelling the placenta will require an additional release of natural oxytocin, the "hormon of love" triggered by the emotional bonding between mother and her newborn. It is therefore detrimental that for cultural reasons this privacy may be disturbed by the presence of strangers just after birth (Odent 2002:101).

8. Postnatal resuscitation

MED> When the new-born does not breathe in spite of first-aid revival such as mucus suction, reflex stimulation or hanging by the feet etc., full medical equipment is required for revival in the operation block. No time is to be lost, as anoxia may bring brain damage almost immediately.

DAI> *Dai*s do not cut the cord before the placenta is out, precisely to avoid any such distress. As long as the baby is linked with the placenta by a "pulsating cord", life is allowed to circulate. If the baby does not breathe air, the *dai* first spreads drops of cold water on his face. If it is insufficient, when the placenta is out, she puts it into hot water and massages it. She rubs the cord with her hands against raw rice to warm it up. When the heat reaches the baby, it revives him. In Maharashtra I met a girl who experienced this resuscitation safely.

SEITAI> The emergency techniques in *seitai* are not known to me.

Discussion of the technical aspects of this study

Is the hospital environment safer than home?

Any good allopathic doctor, in East or West, will say in all sincerity that beyond any doubt, there is no comparison: homes, rich or poor, in city or in village, do not offer the proper sterile environment required for a safe delivery and lack the technology necessary in case of complications. S/he will express satisfaction that the dark ages of deliveries happening at home without medical assistance have, to a great extent, come to an end thanks to the effort of governments and private agencies. There is still a great need for efforts to eradicate this plague of "unattended deliveries" (term employed to describe a delivery that is not assisted by a medical member), a result of illiteracy, ignorance, superstition and poverty.

Although Indian doctors may assert that deliveries at home without medical expertise have a fantastic rate of perinatal death, none of those I met were ever able to provide official statistics. They would comment that the question was superfluous, as everybody "knows and agrees about that."

Till now, I have not found *comparative* official statistics regarding perinatal deaths in Indian hospitals and at home. From my own very limited enquiries, these seem to be quite similar.

Debating about the decline of child mortality in U.P. villages, Pauline Kolenda (1998:11) writes:

> This enormously impressive decline in child deaths (since Independence) has come about with hardly any hospitalisation for birthing. This corroborates statistical analysis of the decline of perinatal mortality in industrial countries (Tew 1998).

The present study supports the idea that deliveries at home, when conducted with care for the mother and child's needs, avoid most of the physical and psychological traumas that healthy women and children may endure in a medical environment. Statistics have shown that for unproblematic deliveries the proximity of medical equipment results in more interventions without improving their outcome (Wiegers et al. 1996; DeVries & Barroso 1997).

On November 23, 1996, the *British Medical Journal* displayed the results of statistical studies of home births in England. They concluded that there is no reason to discourage women from giving birth at home. On the contrary, the "benefit to risk" ratio is positive (cited by Odent, 1998). [Recently in the UK (Tayal 2003), a House of Commons committee estimated that up to 10 times as many women would want to give birth at home, if given the choice, but that this choice was either not provided or taken away.]

Barbara Harper (1994) quotes statistics for the United States:

> In 1975, the mortality rate was the same in hospitals and at home. But in hospitals, 75% of the mothers received drug medication, against 5% at home. Foetal distress, infections and lesions were higher in hospitals, with 10 times more episiotomy, and twice the number of dangerous perineal tears. In 1985-87, the 84 centres for birth (home-like, with minimum technology) showed of 1.3 per thousand of infant death and 0 per thousand for maternal death (op.cit.: 53).
>
> In 1987, perinatal mortality was 9.8 per thousand in Holland as a whole, but only 2.1 per thousand of those deliveries followed by midwifes (op. cit.: 52).

The six main causes of mortality and morbidity

In India, traditional midwives are today held responsible by the elites for the dramatic rates of perinatal mortality (60-70 per thousand) and maternal mortality (3-6 per thousand) in populations suffering from malnutrition, lack of essential commodities and economic exploitation by the same elites. More than 80% of the Indian population belongs to the poor socio-economic group, and 70% of perinatal deaths happen in this same group (Mudaliar & Menon 1990:468, 473).

In 1986, the WHO reported that in developing countries, the six main causes of mortality and morbidity are, in decreasing order: anaemia, haemorrhage, eclampsia, puerperal infections, abortion and complications in dystocic deliveries.

Let us try to consider each of these main causes in the context of this study.

1. Anaemia

Anaemia has mainly socio-economic roots on which both doctors and *dai*s are helpless.

Besides poverty, in Bihar, I witnessed deviant social habits such as beatings, harassment, withholding food from pregnant women in household violence.

Some foods are considered harmful during pregnancy by Indian women. Allopaths and Western oriented dieticians claim that these are harmful taboos. I do not subscribe to this interpretation. Food restrictions during pregnancy usually point to "cold" fare such as bananas, pumpkin, cucumber; those inducing gas, such as aubergine; heavy, like diary products; or abortive, like raw papaya to give examples. Women are very particular in avoiding rice leftovers as these quickly ferment in a hot climate.

2. Haemorrhage

Symptoms are multiple but, to my knowledge, the main causes are:

a) poor health: uterine atonus, haemostasis, hypertension, foeto-pelvic disproportion, placenta praevia and accidental traumatism.

b) socio-economic environment: abortions, traumatism, alcoholism, tobacco and under nourishment.

c) strict medical interventions: uterine cicatrices, episiotomy, hysterectomy and oxytocin intake.

d) wrong handling or lack of expertise: uterine inversion, various ruptures, prolonged dystocia, retention of placenta.

*Dai*s deal with cases a) and b) with the help of domestic health practices mainly at the preventive stage, otherwise they direct the parturient towards the hospital. Cases c) are consequences of medical interventions. Only d) points directly to possible malpractice by *dai*s or doctors.

3. Eclampsia

For allopaths, the causes of eclampsia are mainly: age, multiple pregnancy, insufficient prenatal care.

Naturopaths claim that this "modern disease" is caused by stress and the absorption of high concentration of toxins.

Eclampsia seems to constitute a weak point in the *dais'* practice, although full comprehension of this apparent carelessness would require more data. Eclampsia may belong to these "new diseases" for which time-proved solutions have not yet been found. It seemed to be either unknown, or underestimated by the *dai*s I met, and could be avoided or more easily managed by *dai*s/healers (along with dystocia) if taken care of from the beginning of the pregnancy.

4. Puerperal infections

*Dai*s are often incriminated for not being careful or even aware of the necessity of hygiene. It is also generally acknowledged that this "weak point" of the *dais'* practice is improving today thanks to the general awareness created by NGOs and governmental agencies.

However, studies by NGOs in India suggested that the risk of infection is higher in hospitals than in homes (Bajpai 1996). The infection rate for deliveries in hospital is 23%, as opposed to 5% at home.

One would need to thoroughly follow deliveries accompanied by many different *dai*s to have a clear idea of what exactly hygiene means to them, and how effective their precautions are.

An approach to hygiene which would reinforce the immune system rather than protect it is considered by *dai*s, naturopaths and a few allopaths as the only long-term viable option. At times of recrudescence and resistance of microbes challenging a wider and wider range of antibiotics, the topic is a burning issue.

Many scientists have pointed out that indiscriminate use of antibiotics and vaccines ends up by weakening the natural capacity of the immune system and loads the organism with aggressive foreign elements that remain in the body as morbid matter.

5. Abortions

Legal, chosen or accidental, abortions are often the outcome of social and economic pressures endorsed by women. *Dai*s have a role to play in the same way as doctors to ensure secured abortions.

That *dai*s are less equiped than doctors in performing abortions is admitted as a general statement. I did not investigate this subject enough to reach to any conclusion.

6. Complications in dystocic deliveries

The sheer presence of a table and stirrups under spotlights while strangers are looking at and touching her vagina is enough to deeply disturb some parturients. The immobility imposed in the lithotomy position, monitoring and drips, epidural, administration of hormones and active management for artificially shortening labour are all possible causes of dystocia (Goer 1995: 83-105).

*Dai*s and homebirth midwives may become experts in dealing with dystocic presentations. It remains that they agree that 2 to 10% of cases are beyond their competence and require a transfer to medical care. The relevance of modern obstetrics is best proved for these pathological situations.

A discussion of concepts underlying birth attendance

Transfer of responsibility versus self-reliance

During pregnancy, the mother's instinct is magnified. It becomes easier for her to listen to the signals and needs of her body. Midwives and doctors concerned with the respect of physiology testify that they always benefited by listening to the mother's sensations and to what she expresses.

Nevertheless, the medical environment is under medico-legal regulations. Responsibility is transferred from the parents to the doctor or to the midwife, depository of knowledge and experience.

In the Indian home environment, the mother's instinct and body wisdom are not always paid attention to, but they are more often respected than in any other set-up. The responsibility is still in the women's hands, while they develop an intimate confidence in their own power and resources while giving birth at home. The power of the *dai* is tempered by her low social status inside the community, plus the fact that she is usually on friendly terms with the women she assists.

Seitai places the mother's and baby's inner resources as the main actors of the delivery.

This issue of self-reliance is rarely addressed in discussions about less-interventionist birth attendance. Leboyer's initial contribution to the field (1974) fostered a radical change in attitudes towards the newborn, which could be interpreted as an implicit message of self-reliance to women facing the medical establishment. However, his latest book (1996) is a glorification of classical obstetrics, denying the parturient's trust in her own resources and infantilizing her. I did not find a trace of this "wind of independence" that had driven me and hundreds of women to take things in their own hands two decades earlier.

Interventions

> If the medical community were honest, it would declare clearly that "security" does not exist. That would only correct the flattering image that it complacently gives itself to a public whose only wish is to be deceived. (Leboyer 1996: 162)
>
> The history of obstetrics is the history of vain handling imagined to facilitate the 'labour'. (Odent 1976:81)
>
> […] most of the deliveries should proceed in a normal way, and the high technical level is in itself often the cause of foetal suffering. (ibid.:138)
>
> A good midwife has a good pair of hands and she knows how to sit on them. (Johnston 1998)

The extreme variability of statistics concerning caesarean sections (for instance) points to the fact that interventionism in general is much less a matter of medical necessity than the outcome of social-economic and cultural factors.

Seitai advocates self-reliance. Nevertheless, for self reliance to happen, it also stresses the necessity of a sensitisation process that is not restricted to the time of pregnancy. Confidence in spontaneous involuntary and "semi-involuntary" movements of the organism is a long process overlooked by a culture glorifying control and voluntary coaching to the depends of whatever is involountary.

Throughout this study I came to realise that the more recognised and skilled the *dai*, the less interventionist she wishes to be. Experienced *dai*s, like homebirth midwives in the West, try to restrict themselves to interventions involving the parturient's natural resources. Such practitioners wish to be termed "non-interventionists".

Nevertheless, the pressure on *dai*s is enormous. They are more and more influenced by medical propaganda, often conveyed by parents themselves to the young generation who went to school, even in the poorest areas. This might be the main reason why we witness many invasive interventions in *dai*s' practice, such as routine vaginal touching, systematic supine position for the expulsion and extraction by hand of the placenta. The woman attended by Diana Smith would consider the lying position on her back as the only right one: she said that her midwife had advised her to do so for the birth of her two older children. Such advice, taken out of its medical context, becomes incongruous.

Interviews of *dai*s and village women do not corroborate the commonsensical statement that expert *dai*s are non-interventionist just because their parturients do not require interventions (from a conventional medical point of view): when village women choose the hospital environment, they undergo the same invasive interventions (caesarean section, forceps etc.) as other parturients plus, reportedly, humiliations and bad treatment if they belong to low-caste or deprived communities.

« Physiological » versus « pathological », « normal » versus « natural »

The obstetrical definitions of words such as "normal", "abnormal" and "natural" were given to me by Prof. Barua during his interview in Pondicherry.

According to Prof. Barua, there is a distinction to be done between "normal" and "natural". A *normal* delivery happens in due time, the presentation of the head is right, uterine contractions develop normally, the delivery takes place within 24H, there is no complication, the baby cries immediately, the placenta is normal... No artificial aid is needed.

An *abnormal* delivery takes place when normality is not met, which today represents about 90% of the cases according to Prof. Barua's estimation. The delivery takes place far from due time, the head is posterior, brow, face or shoulder presentation, the progression fails, the mother has hypertension, diabetes, etc. Interventions take place in 50% to 60% of these cases.

It may happen that an abnormal delivery gets solved without medical help. That is called a *natural* delivery. It covers 40 of the 90% abnormal deliveries.

The definition points at "normality" as an ideal situation rather than a category into which most cases should fit. On the other hand, "natural" is viewed as a set of regenerative processes taking place spontaneously to deal with deviant situations, which have become more frequent than normal ones. In my opinion, this perception is closer to that of *seitai* than to naturopathy, as the latter entertains confusion between "natural" and "normal".

Thus, *physiological* deliveries include normal and natural deliveries, opposed to *pathological* deliveries, which are abnormal and only artificially "manageable".

For the sake of preventing complications, fewer deliveries take place undisturbed in the hospital environment.

> The more parameters are monitored, the more likely a parameter will go out of medical acceptable range, thereby calling for an immediate intervention and rarely giving a chance to the regenerative spontaneous process to take place. In this context, a "natural" delivery in the hospital is an exception because it implies taking risks shared at different

> levels by medical attendants, the parturient and her relatives. Acceptable "deviations" are determined by an estimation of risks taken from averaging a "normal" population of parturients, regardless of socio-cultural factors which have more influence than medical ones, as pointed out *supra*.... because birth can be considered as normal [in the sens of physiological] only a posteriori, it is necessary to install for each case the means available to control and prevent it. But these means are themselves a source of new risks and new discomfort, without the possibility of envisaging a simple solution. (Akrich & Pasveer, 1996:141)

A definition of "normality" for the individual, would take into consideration a sensitive approach of "what is" at a certain time of the history of a person, and not "what could be or should be" according to average data or preconceived assumptions.

In the *seitai* approach there is no "normality", but as many normalities as individuals at a given time. Tsuda used to say:

> The biological ground of a person is normal when it provides him/her with maximal adaptation to his/her environment, whatever that is.

From this perspective, pregnancy and delivery become a privileged opportunity for "normalising the ground". On the physiological level, by regulating the hormonal system and correcting defaults of symmetry in the hips, childbirth become a way of regeneration and rejuvenation.

Insufficient advocacy of "natural birth"

If the movement for "Natural birth", considers it to be "physiological" and "spontaneous", then it should also redefine these terms concerning health

- Physiological delivery

Doctors and midwifes in the West with considerable experience of homebirth have come to the conclusion that delivery is basically a physiological process. They emphasise the fact that to deliver is not a disease but a natural phenomenon that should be handled by midwives rather than by obstetricians "as long as it remains physiological".

Although this position is a definite and promising step away from present day hyper-medicalization of child delivery, it contains its own contradiction as it fits into the allopathic dichotomy of "health" versus "disease". Any physiological process is under the risk of unpredictable incidents that make it deviate from physiological to pathological. As previously stated, unpredictability, notably in the case of child delivery, justifies medical monitoring and coaching.

The question has to do with : "physiological" versus "pathological". Unless we put this dichotomy under scrutiny, we cannot expect to grant nature the space and time to do its work.

The same problem concerns benign symptoms treated as pathologies though they are regenerative processes that deserve being understood and accompanied rather than wiped out.

We could say that, as long as spontaneous and benign cold, spontaneous fever, diarrhoea, vomiting, attack of tetany, sciatic, lumbago, eczema, etc. will mean pathology, delivery will mean pathology. They have in common to be said “at risk”, potentially painful and automatically submitted to medical treatments, although they are basically physiologic and adaptative responses of the person to the environment and real life.

- Spontaneous delivery

The spontaneous process of birth is often advocated to promote the respect of physiology. Spontaneity has to do with the involountary nervous system, but not only. The extra-pyramidal nervous system allows what I would call here “semi-involuntary” mouvements: they happen unvoluntarily, but have the singularity to allow voluntary modifications.

During birth, what belongs to the involuntary nervous system concerns the release and flow of natural hormones, their incidence at the onset of labour, the elasticity of tissues, contractions etc. The happening of these manifestations is likely to be influenced by emotions andmovements of the parturient. When the manifestations are judged unfit (which is almost always the case in institutions) they are overtaken by medical drugs supposed to work better than the natural pharmacope.

The semi-involuntary mouvements include breathing and postural adjustment, and decisions taken by the parturient on the basis of her inner sensations: moving, changing positions, trying new ones, drinking, eating, crying, shouting, expressing fear, pushing etc. All these manifestations start involuntarily, but they can be modified at will, either by the woman or medical attendants eager to control the process of birth.

Doctors and midwives demonstrate everyday that voluntary movements can give birth: the control of breathing and pushes, along with instrumentalisation and medication succeed in vaginal birth, otherwise, it is caesarian section. No wonder that today, in hospitals, “natural birth” means vaginal birth, be it with oxytocin, epidural, forceps, vacuum or expression. Because of the strong positive significance assigned to the will and self-control, as opposed to the “wildness” of the loss of control, the efforts of birthing women coached by medical experts are considered the best strategy for “natural birth”. “Pain-free birth”, with Dr. Lamaze to say to parturients how to breath, is the exemple par excellence.

The acknowledgement of “semi-involuntary” movements would enhance the recognition of spontaneous adaptive processes during the delivery.

Confusing “semi-involuntary” and involuntary movements comes to implicitly asserting that the parturient, diving into her “reptilian cortex”, is unable to make thoughtful decisions. Therefore, her behaviour should be handled the same way as her hormones: under medical power and knowledge. Only an external and objective authority will know “what is good” for the parturient.

As long as these questions are not addressed seriously by parents and professionals, pregnant women will continue daydreaming about their chances of delivering in a “natural” way. Most of them will be deprived of self-responsibility, feelings, intuition and instinct by the might of medical knowledge and experience.

The scientific status of modern medicine reconsidered

Throughout this study, we pointed out some discrepancies between scientific data and gynaecologic practice concerning amniocentesis, monitoring, hospital conditions, analgesic and chemical drugs, episiotomy and so on.

> One could dream about obstetrics becoming scientific. (Odent 1998: 33)
>
> [...] What is particularly specific to our times, in the field of birth care, is the extraordinary hiatus between the scientific data published in highly recognised medical journals and the methods used in obstetrics, between those who dictate the orthodox medicine and those who put it into practice (op.cit.: 28).

Economic and political forces underlying the establishment of allopathy and obstetrics as unique "scientific" health practices have long been overlooked by the public, due to considerable media pressure.

The propaganda, accepted without questioning, that perinatal outcomes and longevity improving here and there is the trophy of "scientific modern medicine" should be put under scrutiny. Studies have provided evidence that these improvements began long before the advent of obstetrics and allopathy, with economic and social reforms resulting in progress in diet and sanitation (Sathyamala et al. 1986; Tew 1998).

An awareness of the limits and constraints of allopathy seems to be gaining ground in the West. Unfortunately it is almost non-existent in India. The allopathic way is generally ingrained in people's mind to such an extent that allopathy sounds natural and universal. Journals like *Down To Earth* fighting for environment causes with a great deal of scientific competence will never miss an opportunity to advertise new pharmaceutical drugs, vaccines, standard synthesised molecules and so on.

Even the debate for/against allopathy seems today obsolete to me : the next inescapable "progress" in manipulating nature will soon be a transfer of genetic technology from the vegetal/animal to the human. Thus, once again, radical changes in the domain of medicine will follow the footsteps of technology in agriculture (Odent 2002).

India is one of the very few remaining places in the world where non-medicalized child delivery is still allowed and practised on a major scale. However, allopathy will quickly "swallow" traditional midwifery and indigenous medical systems, after rectifying and submitting them to its own interests. This process has been observed in most developing countries.

*Dai*s and their communities in India

Unfit for categorisation

I never met two *dai*s who were alike: all shades are possible from the old, traditional ones to the young, modern-oriented ones adopting allopathic practices.

The more *dai*s I meet, the less inclined I am to see them as a standard social type on which I could project my own expectations and convictions.

*Dai*s are not always from the lower castes (even though a very large majority belongs to them). Many *dai*s in Maharashtra belong to the Maratha community, and I have a reliable testimony of few Brahmin *dai*s in the same state performing deliveries even with outcast parturients.

Even gender discrimination is not systematic. Zahida Sheik, one of my informants, is a Muslim woman who learned from her father. She told me once: "He would operate with folded eyes, but mine were wide open!"

*Dai*s in the literature

Traditional midwives are almost forgotten figures in the Indian literature.

Ayurvedic doctors have produced prolific material on mother and childcare from the traditional angle of their "highbrow" medicine. Ayurveda, the Vedic-Brahmanic medical tradition, is the construction of high-caste erudites who codified and rationalised existing practice, blurring traces of its origin. Whereas Sutras proclaim that Ayurveda was revealed by the Creator (Brahma) even before the creation, irreverent scholars argue that Ayurvedic technical knowledge is nothing more than an appropriation of popular health practices by the dominant caste. In addition, this process took place after unsuccessful attempts to suppress empirical "materialist" knowledge which was antagonist to Brahmanic views on ritual purity and pollution.

Sociological and anthropological aspects of the *dai* community have been investigated in works by Patel (1994) and Chawla (1994).

I have come across only two books attempting to assess the practice and knowledge of *dai*s: Sabala & Kranti (1996) and Bajpai (1996). The former has only one chapter on *dai*s. The latter is an ambitious survey with the participation of 26 NGOs. In both works, *dai*s are introduced as skilled and knowledgeable midwives. However, the authors supply their study with so many contradictory examples that sometimes one does not know where to stand. This contradiction might be caused by communication gaps or insufficient analysis of survey data. Comments on deliveries reflect the allopathic background of their authors.

Competence, recognition and validation of knowledge

Diane Smith would probably allow me to say that the marginal and inferior status of western midwives, when it comes to dependence on doctors and being most of the time assigned the responsibility of failures, may be parallel to that of *dai*s.

A *dai*'s competence is sanctioned by her community. Indeed, nobody would trust a woman who cannot handle deliveries well, or who has many death or trauma records in her practice. The *dai* cannot hide and escape behind diplomas or any sort of medical or legal power. She does not get lost in a crowd of patients whom she is most probably not going to meet again.

Among my informants, the ones who were acknowledged as experts claimed that they are only rendering a service to the community. They do not take fees, but they accept tokens of appreciation and recognition. They keep themselves away from any kind of commercialisation.

The learning process

When parturients are exposed to this service-oriented attitude of the expert *dai*s, they are not tempted to trade off responsibility against expertise. This creates a relationship based on mutual confidence and freedom. The two persons share the privilege of being within the frame of a creative work. This intimacy with the birth process is cultivated by women to the extent that some of them later choose to deliver their babies without expert assistance, once they have appropriated the expertise.

This self-learning process is essential: it allows the *dai*s to acquire their know-how. This may explain why most of them claim that "they were never taught." They learned from direct experience: the birth culture in India gives them many opportunities to be present at deliveries, and this from their youngest age. Later refined their knowledge by interacting with fellow *dai*s and parturients.

I once asked Bhusya Devi whether she was teaching her art to anybody. She replied: "No".

- How will your knowledge be transmitted?
- I teach my daughter-in-law.
- Do you also teach your daughter?
- Why should I? (with the gesture of tearing off her heart) Do you want my soul to be taken out of me, going to somebody else's house? (Her daughters are married and live with their in-laws as per the custom.)
- Who trained you?
- My mother-in-law.

This dialogue is illustrative of the idea of a "domestic" knowledge being built up and transmitted within the enclosure of the house, as opposed to highbrow traditions in which blood and caste lineage are preponderant, and where formal learning is a must.

This testimony relates to a custom observed in Bihar. Maharashtrian *dai*s seemed less restrictive in this respect. However they do have a selective attitude towards transmission of knowledge. *Dai*s prefer not to part with their knowledge, rather than sharing it with persons whom they feel not fit or uncommitted enought to attending deliveries.

Since delivery processes are far from being normative, the experience of non-intrusive attendance cannot be reduced to a set of standard procedures that could be shared in a formal training. Transmission is therefore only made possible by cultural immersion, observation and osmosis with other *dai*s, mothers-in-law, or other competent women. This apprenticeship cannot and should not be either formal or standardised if it wants to retain its vitality and counteract its accuracy (Bel A. & B., Poitevin & Rairkar 2002).

In short, delivery expertise is not a system built in institutions. It belongs to domestic life, to the "invisible" — non-acknowledged — knowledge.

Inadequacy of medical coaching for the *dai*s

A recurrent opinion in the official writings on Indian traditional midwives states "how ignorant they are" but "how useful they could be in remote places if trained by a doctor..."

Similarly, there is an ongoing assertion in the West that traditional midwives are "very happy to have access to medical knowledge, which allows them to reduce perinatal mortality".

The training of traditional midwives by doctors, a program launched by the Government of India under the supervision of the WHO, happens to be very far from this idyllic scenario (Bel A. & B., Poitevin & Rairkar 2002).

In my investigations, the few *dais* who expressed satisfaction for this coaching were those with little or no experience, who after fifteen days of training considered themselves entitled to coach birthing women... They acquired the conviction that they knew better than their elders, throwing away "backwardness and superstitions". They practice oxytocin shots, repeated vaginal touching, have mother lying on her back, abdominal expression, immediate cutting of the cord, fast extraction of the placenta, immediate breast-feeding and good nourishment for the mother just after the delivery.

As pointed out by Van Hollen (2003), trained midwives give advice and orders that initially families may be reluctant to follow. However, they end up complying with the prescriptions, as they like to do things 'the modern way". Moreover, it saves them from the risk of being despised in the hospital because of their customs or/and low social status.

The fact that these new ways of birthing may cause problems, especially because of the technology supposed to assure security, will only lead, in spite of every thing, to more women giving birth in hospitals.

Conversely, without exception, old and experienced *dais* expressed their disillusion towards this training program. They said to me that they "did not learn anything" because they "knew it already" and did not agree with most of it. They were rather under the impression that the doctors were trying to steal their knowledge and know-how.

Once I asked Bhusya Devi who attended a WHO training, whether doctors are coaching deliveries well. She replied: "Yes".

- « Have you seen them attending deliveries? »
- « No!... Who would dare to put hands into a woman in front of me? »

The medical training of *dai*s dramatically changed their lives. Once they got the diploma, the community suddenly revised its attitude towards them. The token of appreciation traditionally paid to them disappeared: since they get official recognition and a salary from the government (a pittance), why give more? A diploma given to illiterates does not promote them in the eyes of medical professionals, nor does it raise their social status. Thus, their knowledge was rated at the level of their social status: at the bottom of the scale.

This explains why entire groups of *dai*s boycotted this training. Many who attended sessions refused the diploma and the salary in spite of extreme precarity.

D*ai*s' specific knowledge is mercilessly submitted to oppression and suppression by doctors and the elite in general, as it offers little resistance: the women do not have arguments to support their customs and practice. They do not make any distinction between the "whys" and the "therefores". They do it the way that has proved best across generations. However, this argument does not lead to validation in modern times.

We hope that this study will highlight the rationale of this know-how by bridging it with *seitai* technique, as the latter has its own keys for understanding subtle life processes.

Taking sides: awareness of social issues

The West burnt its own *dai*s on stakes during the Middle Ages under the combined ostracism of doctors and priests who labelled them "witches" (Institoris & Sprenger 1997). Thus, women's popular knowledge about health and delivery has been eradicated in these countries. How long will Indian *dai*s resist?

An proposition of this study is that being poor and illiterate does not mean being uncultured and without resources. "Backward" people's knowledge ought to be reconsidered in the context of today's "global" experience.

Scholars keep insisting on the adverse social and material conditions in which *dai*s and their parturients are operating. They describe *dai*s as an archetype of oppressed gender and caste: awareness of poverty, injustice, violence, etc.

Victimising rural women as a whole, and *dai*s in particular, contributes nevertheless to reinforcing the generally-held belief that these conditions are the stigma of poor economic status. The weaknesses of this position are threefold.

1) The idea that poverty and adverse conditions are a "diminishing" factor is a fallacious and vicious statement that opens the door to all kinds of ostracism (Abha Bhaiya, personal statement).

2) It does not challenge oppressive forces in the urban and opulent social groups, to which the authors belong.

3) What passes for an awareness of social injustice is often an automatic response advocating literacy programmes as the necessary and urgent initial step. This assumption overlooks the side-effects of formal education: a depreciation of domestic knowledge and local world views, which results in people rejecting their own systems of reference, i.e. the very substrate of their culture and collective identity.

Inadequacy of NGO's coaching for the *dai*s

Dais are the target not only of WHO and the Indian government, but also of NGOs.

Traditional midwives express a deep concern about the preservation and transmission of their knowledge:

> « Who is going to learn from us in these modern times, with so many hospitals around us, and people sitting on our heads to hurry up deliveries while they are less and less willing to support us? Our knowledge will end with us. »

Urban activists and foreigners have their own way of interpreting this issue, coming up with statements such as: the *dai*s express their needs for "upgrading skills and education". They would wish to "meet each other and share experience and difficulties" and to prepare

themselves for "exposure into a medical environment that has (male(oriented mechanised childbirth."

I am quite sceptical about this interpretation as it contains an implicit justification of a training agenda... To me, it appears as a case of cultural co-optation, an appropriation rather than an interpretation. Significantly, whenever I mentioned meetings, training, sharing and medical recognition to my informants, I got only scepticism or rejection as answers.

In the context of workshops organised by social workers, the *dai*s who are more articulate may indeed come forward with "constructive" answers that would not be prompted in rather neutral individual interviews. It remains that certain stereotyped responses seem to reflect NGOs' expectation to come forward as an alternative educational force in development programs...

The risk of such gatherings is to reproduce the usual pattern of top-down transmission of knowledge, in which the *dai*s would in fact be "trained" by "experts", and their knowledge eventually validated according to the Western medical standard. In such conditions, NGOs and action groups would only work as transmission belts of the power in place.

The so-called "participative" approach advocated by many NGOs (who sing to the tunes of the World Bank) is mainly a manipulation technique by which a "consensus" is attained by smoothly imposing the viewpoints of outsider experts (Poitevin 1997). Hopefully this study will contribute to suggesting that we should first create conditions to listen to *dai*s as experts.

Still, the awareness of this problem is growing. The term "training" (an obvious top-down educational process) is under scrutiny. Diane Smith (and many others) would prefer "encounter" or "dialogue" with the *dai*s," "sharing of skills"... anything that would give voice to the *dai*s. I subscribe with efforts to place the dialogue at the technical level from the informants' point of view, so that they will not have the feeling of being trained by people who are in a way "illiterate" or strangers to their worldviews.

A cooperative approach of group gatherings, as initiated by Tara Ubhe, a social animator of Village Community Development Association (VCDA, Pune), implies a long-term process in which the agenda of discussions is set by all participants in the meeting. Everyone is an "expert" in his/her own right. More important is that the evaluation of the self-learning process engineered by such meetings is not the sole privilege of the "organisers". Social animators are members of the community in which the gatherings take place, unlike social workers who come from outside, with a formal training (Poitevin 1997).

Active observation

The term "worldview" deserves clarification in the context of this study. For an anthropologist it would designate the whole set-up of beliefs, customs and rituals associated with the practice of midwifery in a specific cultural context. Constructing an abstract model of mental representations may be needed for analysing collective communication based on shared meanings. However, because of the very nature of the subject, the focus of my work is on subjective communication and an accurate observation of technical facts.

In India, rituals, songs and myths are found in almost every activity of daily life, be it preparing food, working in the fields, gossiping or singing. In the unique experience of child

delivery, there is nothing I would isolate as a specific "cultural" element, accounting for its "ritualistic" or "devotional" dimensions. In other words, the sacred and the profane are so entangled that setting them apart would reduce them to museum pieces devoid of any dynamics.

There is no doubt that communicating with the *dai*s will require a new way of listening to women whose voices may not operate on the usual channel. When I met Bhusya Devi in Gomoh (Bihar), she asked me to lie down and she explained her technique manipulating my belly. A year earlier I had noticed her in the *Matrika* workshop: when prompted to introduce herself, she stood up, looked around... and sat down, mouth closed for the rest of the workshop.

Issues at stake

According to official statistics, about 70% of deliveries in India take place "without medical assistance." Therefore the traditional midwife is not a marginal actor. She operates in many places both in rural and urban areas. Rather than glorifying her culture as a symbol of ageless wisdom opposed to dominant materialistic forces, it is of prime importance to understand the relevance of her knowledge to the present needs of birth attendance, and the difficulties that the *dai* is facing.

Several doctors I met in India during this study expressed their eagerness to search for a more human, open and creative art of healing and delivering, taking a distance from today's consensus. These doctors are sympathetic to the *dai*s' knowledge. Although they wish to interact with *dais* and vice versa, most of the time both are unable to "cross the border" and meet on the same ground, through the same language to understand each other. Moreover, such doctors represent an exception in the Indian medical community.

This study suggested new ways of apprehending this knowledge by connecting it to recent work on child delivery in various parts of the world.

A solid argument in favour of certain practices that prove better than those of conventional obstetrics will increase the *dai*s' self-confidence, with positive effects on their recognition and social status.

If *dai*s are given a chance to interact with practitioners of the so-called "alternative" medical systems - in fact some of which share their concepts with dais to a great extent, they will enhance their own skills while providing new insights into the practice.

Traditional midwives are among the few who have the potential to "wake up" practitioners of health care systems outside allopathy. I mean to say that naturopathy, cranial osteopathy, herbal medicine as well as *ayurveda, unani* and *siddha* medical systems still leave the scene as soon as the actual delivery takes place...

There is a need to gather skills and information from all parts of the world where isolated men and women may have found answers to the needs of birth by "natural" and simple means, thereby avoiding the traumas and side-effects of drugs and surgery whenever they could be avoided, and returning child delivery to its original definition: an act of creation.

> Industrialised society collapses into schizophrenia, precipitated by medicalized birth. Insight into the matter is called for... before the intervention of Nemesis. (Odent 1976:154)

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