Journal of Prenatal and Perinatal Psychology and Health 27(1), Fall 2012

The Rights of the Human Newborn Baby

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Abstract: It is becoming acceptable to claim that newborn babies have rights based on our current understanding of their basic needs. During the second half of the twentieth century, these needs have been identified by a great diversity of emerging scientific disciplines (such as ethology, studies of the behavioral effects of hormones, immunology, bacteriology, studies of the content of early colostrum, studies of the initiation of lactation). We can summarize the main conclusions by claiming that a newborn baby needs its mother. This paper addresses this and other basic needs of the newborn from a human rights perspective.

Keywords: Human Rights, Basic Needs, Bacteriologic Perspective, Newborn Needs

All human beings are "endowed with reason." This assumption is the basis of the *Universal Declaration of Human Rights*, as clearly expressed in its very first article. Obviously the authors of the declaration had not considered - in the context of the middle of twentieth century - the particular situation of the two main actors in the perinatal period, when there is no room for rational means of expression. One cannot interpret literally the irrational language of some women in hard labor, as soon as the neocortical control has been eliminated: "Kill me…shoot me…let me die…do anything…my bowels are getting out…etc." On the other hand, for obvious reasons, the baby cannot rationally express his or her point of view.

However these two actors have rights. These rights are related to their basic needs. These basic needs can be expressed in a rational way through scientific language. The point is that scientific knowledge has been evolving at a high speed since the middle of the twentieth century. This has been the case, in particular, with regard to our understanding of the basic needs of newborn babies.

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Before The Historical Scientific Discovery

Focusing on the basic needs - and therefore the rights - of newborn babies implies that we keep in mind one of the most important scientific discoveries of the second half of the twentieth century, which occurred after the Universal Declaration had been adopted.

Let us recall that we had to wait until the 1960s and 1970s to learn that a newborn baby needs his or her mother. For obvious reasons this is a real discovery since, for thousands of years, in all human societies we know about, mothers and newborn babies have been separated and the initiation of breastfeeding has been delayed. In other words it has been routine for a long time to neutralise the "maternal protective instinct." The nature of this universal mammalian instinct is easily understood when one imagines what would happen if one tried to pick up the newborn baby of a mother gorilla who had just given birth.

It would take volumes to review all the invasive perinatal beliefs and rituals that have been reported in a great diversity of cultures. As early as 1884 *Labor Among Primitive Peoples* by George Engelmann provided an impressive catalogue of the one thousand and one ways of interfering with the first contact between mother and newborn baby. It described beliefs and rituals occurring in hundreds of ethnic groups on all five continents (Engleman, 1884).

The most universal and intriguing example of cultural interference is simply to promote the belief that colostrum is tainted or harmful to the baby, and that it is even a substance which needs to be expressed and discarded (Odent, 2008). The negative attitude towards colostrum implies that, immediately after the birth, a baby must not be in the arms of his or her own mother. This is related to a widespread deep-rooted ritual, which is to rush to cut the umbilical cord. Several beliefs and rituals can be seen as part of the same interference, all of them reinforcing each other.

Man's enormous potential for meddling in the newborn baby's relationship with his or her mother is universal. During the six months I spent as an "externe" (medical student with minor clinical responsibilities) in the maternity unit of a Paris hospital, in 1953, the routine for the midwife was to immediately cut the cord and to give the baby to a help nurse. I never heard at that time of a woman trying to establish a body-to-body contact with her newborn baby. The cultural conditioning was too strong. Everybody was deeply convinced that the newborn baby urgently needed care given by somebody else. At that time, while they were staying in the maternity unit, newborn babies were in a nursery. Mothers were elsewhere. Nobody had ever thought that they might be together.

Scientific Advances

This reminder of a universal deep-rooted cultural conditioning is a necessary step to evaluate the importance of the scientific advances that started in the 1960s. A new generation of human studies was inspired by what we learned about mammals in general thanks to the founders of ethology. This is how we became familiar with the concept of critical periods for mother-newborn attachment. In other words we understood that, among mammals in general, there is immediately after birth a crucial short period of time that will never happen again. The time was ripe to evaluate the effects of immediate body-to-body contact between mother and newborn baby, as an absolutely new intervention among humans. The names of Marshall Klaus and John Kennell in the USA are associated with such studies (Klaus & Kennell, 1976). Also, studies were conducted in Sweden (De Chateau & Wiberg, 1977a; De Chateau & Wiberg, 1977b; Shaller, Carlsson, & Larsson, 1979).

It is in such a context that other researchers started to investigate the behavioural effects of maternal hormones that fluctuate in the perinatal period. They first looked at oestrogens, progesterone, and prolactin. However, until recently, there was a widespread lack of interest in the possible behavioural effects of oxytocin. We can understand why. Researchers (and practitioners) knew that intravenous infusions failed to influence maternal behaviour (Rosenblatt, 1969). Furthermore lesions of the posterior pituitary gland which prevented the release of oxytocin into the blood stream did not block maternal behaviour (Herrenkohl & Rosenerg, 1974). These negative results were interpreted as conclusive evidence that oxytocin played no role in maternal behaviour and these beliefs remained almost unchallenged as long the prevailing view persisted that oxytocin was solely a peripheral hormone released into the bloodstream by the posterior pituitary gland.

A new generation of studies was inspired by anatomical evidence that oxytocin might be released directly into the brain and that there are brain receptors to oxytocin. This new anatomical data inspired the historical experiment by Cort Pedersen and Arthur Prange, presented for the first time at the National Academy of Sciences, USA, in December 1979. Pedersen and Prange bypassed the “blood brain barrier” and injected oxytocin directly into the cerebral ventricles of intact virgin rats (Pedersen & Prange, 1979). They found that half the animals developed the full spectrum of maternal behaviour in less than an hour after treatment. In this new experiment the rats that

responded to oxytocin with maternal behaviour were in stages of oestrous cycle associated with rising, elevated, or recently elevated estrogens. Not only did this mean that Pedersen and Prange were demonstrating the behavioural effects oxytocin, they were also suggesting that these effects are dependent on the hormonal context. Since that time hundreds of studies have confirmed the powerful behavioural effects of oxytocin. It is commonplace to summarize our current understanding of these effects by claiming that oxytocin is the main hormone of love.

During the same phase of the history it was demonstrated that mammals in general and women in particular control the pain of labour by releasing morphine-like substances commonly called endorphins (Csontos et al, 1979; Akil, Watson, Barchas, & Li, 1979). We learned also that these endorphins (beta-endorphins) stimulate the secretion of prolactin, the motherhood hormone and a key hormone of lactation (Rivier, Vale, Ling, Brown, & Guillemin, 1977).

A sudden interest for the basic needs of the baby in the perinatal period led to investigation of its own hormonal activity. It appeared that during the birth process the fetus is protecting itself by releasing endorphins and noradrenalin and, therefore, reaching a specific hormonal balance.

Finally, thanks to advances in our understanding of the behavioural effects of hormones, and taking into account that maternal and fetal hormones are not yet eliminated during the hour following birth, it became possible to interpret the concept of a critical period for attachment. During the short phase between the birth of the baby and the delivery of the placenta each hormone has a specific role to play in the interaction between mother and newborn baby. Let us also mention that, according to Swedish studies, the mother has the capacity to release, just after the birth of the baby, a peak of oxytocin that is still higher than for the delivery itself (Nissen, Lilja, Widström, & Uvnäs-Moberg, 1995). Since oxytocin release is highly dependent on environmental factors, it is essential to mention that reaching this peak is possible on the condition that the mother, after an unmedicated birth, is not distracted at all while discovering her baby. It is significant that it is just after the birth of a baby that a woman has the capacity to release the highest possible peak of love hormone.

The hormonal perspective has played an important role in explaining in scientific language that a newborn baby needs its mother and, therefore, in challenging thousands of years of cultural conditioning. It has inspired a new kind of clinical observation. We learned that when there is a free undisturbed and unguided

interaction between mother and newborn baby, there is a high probability that the baby will not be long at finding the breast: human babies usually express the "rooting reflex" (searching for the nipple) during the hour following birth, at a time when the mother is still in a special hormonal balance and has therefore the capacity to behave in an instinctive "mammalian" way. The result of the complementary behaviour between mother and newborn baby is an early initiation of breastfeeding (Odent, 1977; 1978). For obvious reasons, nobody knew, before the 1970s, that the human baby has been programmed to find the breast during the hour following birth. This is also the time when a sudden interest in the content of human colostrum developed. After thousands of years of negative connotations, human colostrum was officially recognised as a precious substance.

Basic Needs from a Bacteriologic Perspective

Today the bacteriological perspective is becoming the most effective one to inspire useful questions about the route of birth (perineal or abdominal) and the place of birth (familiar vs.unfamiliar environments).

From the early days of microbiology until the 1970s, one of the roles of midwives and doctors involved in childbirth was to protect the newborn babies against all microbes, including those from maternal origin. It was usual to shave the mother at the beginning of labor, to give her an enema, and to put antiseptic solutions around the nipple.

A new step in the history of our understanding of childbirth from a bacteriological perspective started with studies demonstrating that, compared with the placenta of other mammals, the human placenta is highly effective at transferring Immunoglobulin G (IgG) to the fetus (Virella, Silveira Nunes, & Tamagnini, 1972). While, in our species, the levels of IgG of a neonate born at term is at least 100% of the maternal levels, among bovines, for example, they can be below 10%. Clearly the main preoccupations are not the same among humans as among other mammals. The newborn calf is immediately dependent on antibodies provided by early colostrum. In other words, among many species of mammals, such as bovines, the colostrum is sensu stricto vital. Among humans, the main preoccupation must be phrased differently: which microbes will be the first to colonize the germ-free newborn's body? A well-known concept used by bacteriologists is a reason to give a great importance to this question. "The race for the surface" means that the winners of the race to reach a germ free territory will likely be the rulers of the territory. This concept has had practical implications.

During epidemics in nurseries it was found that the colonization of babies with virulent staphylococci could be prevented by early voluntary contamination (nasal or umbilical) with a strain of staphylococcus selected because of its very low virulence and its great susceptibility to penicillin (Dubos, 1966).

It is clear today that to be born is to enter the world of microbes and that, from a bacteriological point of view, a newborn baby ideally needs to be urgently in contact with only one person – her mother. It is also clear that the human mammal had been programmed to enter the world via the bacteriologically rich perineal zone: this is a sort of guarantee that the newborn baby – particularly her digestive tract and her skin - will be immediately contaminated by a great variety of friendly germs carried by her mother.

However, the general rule of an easy placental transfer of antibodies, particularly intense from 38 weeks onwards (Cederqvist, Ewoll, & Litwin, 1978), must be modulated. One must take into account that there are four subclasses of IgG and that the transfer of the subclass 2 is not as effective as the transfer of the other subclasses (Garty, Ludomirsky, Danon, Peter, & Douglas, 1994; Hashira, Okitsu-Negishi, & Yoshino, 2000). This is a way to interpret the apparently mysterious vulnerability of human babies – particularly premature babies – to streptococci B transmitted by the mother.

We'll notice that for thousands of years all human groups have dramatically interfered in the process of microbial colonization of the newborn's body, since, as a general rule, mothers and newborn babies have been separated and the initiation of breastfeeding has been delayed.

Today, in the age of medicalization of childbirth, there are new obvious powerful ways to interfere. It is easy to convince anyone that babies born vaginally and babies born by caesarean enter the world of microbes in radically different ways. Furthermore, the exposure of fetuses to antibiotics in the perinatal period is common. Antibiotics are used in frequent situations such as detection of streptococci B, premature rupture of the membranes, and also cesarean sections: some public health organization, such as NICE (National Institute for Clinical Excellence) officially recommend injecting antibiotics before starting a cesarean (NICE, n.d.). In all these situations the use of antibiotics is disputable. In the current scientific context, there is a need for feasible studies in order to limit exposure of fetuses to antibiotics in the perinatal period. Let us just mention, for example, in vitro studies of the effects of allicin (the active component of garlic) on B streptococci (Cutler et al, 2009).

Childbirth from a bacteriological perspective is becoming a hot topic at a time when an accumulation of data suggests that the way the newborn's body is colonized immediately after birth can have medium term and long-term consequences. We can summarize our current knowledge by claiming that, when established, the human gut flora cannot be easily modified, as if it was an aspect of the personality.

Among the medium term consequences, let us mention the conclusion of studies comparing the activity of cells with immune action in the blood of babies born either by vaginal route or by caesarean (Molloy et al, 2004). The influence of the way the baby is born on the immune response is still detectable at the age of six months (Gronlund et al, 1999). Let us mention also Finnish studies that explored the faecal flora of 34 children born by the vaginal route and of 30 children born by cesarean with antibiotic prophylaxis, at the age of 3 to 5, 10, 30, 60 and 180 days. The faecal colonization of infants born by caesarean was delayed. The faecal flora was still disturbed at the age of six months among the cesarean born children (Gronlund, Lehtonne, Eerola, & Kero, 1999).

Recent studies in several fields of medicine have demonstrated the long-term consequences of the way the gut flora is established in the perinatal period, in relation to the mode and place of delivery. According to a Dutch study, vaginal home delivery, compared with vaginal hospital delivery, is associated with a decreased risk of eczema, sensitization to food allergens, and asthma. Mediation analysis showed that the effects of mode and place of delivery on atopic outcomes were mediated by C difficile colonization (van Nimwegen et al, 2011). The results of a breakthrough article in Nature identified the gut flora as a contributing factor to the pathophysiology of obesity. Microbial populations in the gut are different between obese and lean people: among mice and humans, obesity is associated with changes in the relative abundance of the two dominant bacterial divisions (the Bacteroidetes and the Firmicutes) (Turnbaugh et al, 2005). A new generation of studies of gut flora can establish new links between obesity and type 2 diabetes since bacterial populations in the gut of diabetics differ from non-diabetics (Larsen et al, 2010).

The most unexpected avenues for research related to gut flora might be in the fields of behavior and mental diseases. Data provided by animal experiments suggest that there is a critical period early in life when gut microorganisms affect the brain and change behavior in later life (Heijtz et al, 2011).

We cannot dissociate the questions related to the microbial colonization of the digestive tract to the questions related to the

colonization of the mouth. The *Journal of Dental Research* has published an authoritative study demonstrating that the mode of delivery (vaginal route compared with c-section) affects oral microbiota in infants, and therefore dental health later on in life (Lif Holgerson, Harnevik, Hernell, Tanner, & Johansson,, 2011).

While until now most studies focused on the colonization of the digestive tract, we must also realize that trillions of bacteria, fungi, viruses, archaea, and small arthropods colonize the skin surface, collectively comprising the skin microbiome. Microbial skin colonization is expected to critically affect the development of the skin immune function …another vital avenue for research (Capone, Dowd, Stamatas, & Nikolovski, 2011).

All these considerations about the early microbial colonisation of the newborn's body suggest inescapable differences between births via the bacteriologically rich perineal zone and births by caesareans. They also lead us to contrast births in familiar and births in unfamiliar environments.

From Needs To Rights

Today, it is possible to summarize in scientific language how the basic needs of newborn human babies should be met: ideally, a newborn baby should be born via the bacteriologically rich perineal zone, after an unmedicated delivery followed by an immediate free interaction between mother and baby compatible with early initiation of breastfeeding. It is obvious that these basic needs cannot be translated overnight in terms of rights, after thousands of years of culturally controlled childbirth, and at a time when we have reached an extreme situation. In the age of synthetic oxytocin (the use of synthetic oxytocin is by far the most common medical intervention in childbirth) and simplified techniques of cesareans, the number of women, at a global level, who give birth to the baby and to the placenta thanks to the release of a cocktail of love hormones is becoming insignificant.

To get out of this situation, the first step would be to rediscover the basic needs of labouring women. Once more we must rely on the scientific approach, which has the power to challenge thousands of years of cultural conditioning. Since it has been possible, during the second half of the twentieth century, to rediscover the basic needs of newborn babies, we assume that a rediscovery of the basic needs of labouring women via the physiological perspective is not utopian during the twenty first century. In fact the physiological perspective

can already offer an understanding of the birth process that is in complete contradiction with our cultural conditioning.

From a physiological perspective, the birth process appears as an involuntary process under the control of archaic brain structures. One cannot help an involuntary process, but there are situations that can inhibit it. Modern physiology can identify these situations (such as situations associated with a release of adrenaline and situations associated with neocortical stimulation). The birth process needs to be protected against inhibiting factors. In this scientific context the keyword is "protection." The physiological perspective can open the way to a new paradigm.

This new paradigm must be contrasted with our current dominant conditioning. For thousands of years the basis of our cultural conditioning has been that a woman is not able to give birth without some kind of cultural interferences. This is illustrated by the roots of the words used in daily language. For example obstetrics (from latin obstetrix, the midwife) implies that a woman cannot give birth without somebody staying in front of her (ob-stare). Many rituals have made the active presence of an agent of the cultural milieu still more necessary. For example, if there has been a ritual genital mutilation, somebody must be there to cut the hard perineal scar. The widespread ritual of rushing to cut the cord also implies the necessary presence of an active person.

This deep-rooted cultural conditioning has been reinforced recently by other factors than beliefs and rituals. Some theories have been influential. For example, the theories of Pavlov have been at the root of many schools of natural childbirth promoting the idea that to give birth a woman needs a guide telling her how to breathe, how to push, etc. In the age of videos, photos, and television, one cannot ignore that our current cultural conditioning is mostly determined by visual messages. Let us mention the powerful effects of the recent epidemics of videos of so-called "natural childbirth." Almost always several people surround the labouring woman. Young generations familiar with these pictures understand that the basic need of a labouring woman is to be accompanied by several persons. The effects of these visual messages are reinforced by the modern vocabulary: for example, to give birth women need a "coach" (bringing her expertise) and support persons (bringing their energy). More than ever the message is that a woman has not the power to give birth by herself.

We must add that this cultural conditioning is now shared by the world of women and the world of men as well. While traditionally childbirth was "women's business," men are now almost always

present at births, at a phase of history when most women cannot give birth to the baby and to the placenta without medical assistance. A whole generation of men is learning that a woman is not able to give birth. We have reached an extreme degree in terms of conditioning. The current dominant paradigm has its keywords: helping, guiding, controlling, managing (labour management), coaching, supporting… the focus is always on the role of other persons than the two obligatory actors. Inside this paradigm, we can include medical circles and natural childbirth movements as well. Will twenty first century scientific disciplines be powerful enough to make a real paradigm shift possible?

There are other reasons why the basic needs of newborn babies cannot easily be translated in terms of rights at an individual level. We must keep in mind a difference between human beings and other mammals. When the birth process is disturbed among non-human mammals (for example via an epidural anaesthesia or any other intervention) the effects are spectacular and immediately detectable at an individual level: the mother is not interested in the babies (Krehbiel, Poindron, Lévy, & Prud'Homme, 2011). In this regard humans are special. Millions of women all over the world have taken care of their baby after an epidural birth. We know why the behaviour of humans is more complex and more difficult to interpret than the behaviour of other mammals, including primates. We understand why researchers need huge numbers to detect significant long-term effects of the modalities of birth (see the wealth of data on the primal health research database: www.primalhealthresearch.com). It is because human beings have developed sophisticated ways to communicate. They speak. They create cultures. Their behaviour is less directly influenced by their hormonal balance and more directly by the cultural milieu. When a woman knows that she is expecting a baby, she can anticipate displaying some maternal behaviour while other mammals have to wait until the day when they are in a specific hormonal balance to be interested in their babies. This does not mean that we cannot learn from non-human mammals. The spectacular and immediate behavioural responses of animals indicate the questions we should raise about ourselves: where human beings are concerned, the questions must include terms such as "civilisation" or "culture."

The time has come to learn to express our objectives in a positive way that would include the collective dimension: in the current scientific context the objective should be that as many women as possible on this planet can give birth to the baby and to the placenta thanks to the release of a "cocktail of love hormones."

In spite of these difficulties inherent to the nature of Homo sapiens, it is realistic and even urgent to introduce – one way or another - the concept of "rights of the human newborn babies." This should imply the right for pregnant women to keep several options open regarding the birth environment.

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