

ENCA 25th anniversary 2018

28th of April, 2018 Sanski Most, Bosnia & Herzegovina

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To give birth or to be delivered – a question of setting. Birth physiology revisited

As an introduction I would like to start with a short personal story.

Years ago I got a phone call: “Labour has started” – I come! At my arrival somebody was expecting me outside the door. I got a gown to put on. Why? Not for hygiene reason, but because your own **smell** is not familiar and could disturb.

And please, do not speak loud, **only whisper**, your voice is not familiar either. Beside there is nothing to say! And don't make any jerky movements, this could be disturbing. After these advices I entered the room cautiously.

It was dark, only lightened by the red light of a heating device placed over the birthing place.

Very quiet and warm. The only sound one could hear was a deep breathing.

I approached with lot of care, trying not to be seen, nothing should disturb the feeling of safety: intense labour, eyes closed.

As the new-born appeared, and after making sure that the mother was taking care of her, after the baby found the nipple and started to suck vigorously, my companion gave me a sign: we should leave. Let her alone.

Outside I asked why? “Because now nobody should disturb this moment even by watching”. Privacy. The baby sucks, the mother takes care, without disturbances the placenta will come. Any disturbance could have life threatening consequences which could be: bad separation of the placenta, danger of haemorrhage, bleeding... etc...

As we entered the room about 15 minutes later, the placenta was lying on the straw, the mother sow was on her side. Her 12 new born piglets were suckling.

Happy end !

Will you find it scandalous if I tell you my thoughts at this moment?

I wished human mothers could have the benefits of such a wise birth attendant-farmer who knows how not to disturb birth physiology. This farmer is a wise midwife, fully aware of the importance of all the details.

I guess you will remember my example and thus remember that human beings are mammals too. But we are mammals with a developed new brain, the neocortex which makes the difference and which is to some extent responsible for birthing difficulties.

And now let us look at birth physiology in humans with an environmental approach. The environment is a product of the thousand years of socialization of childbirth and of cultural conditioning to which all the devices belong including the hospitalisation of birth.

Obstetrics went/goes the wrong way

To look at parturition as a mechanical procedure and reduce it to this should belong to the past.

To look at the process of parturition as an amount of mechanical difficulties to be overcome is outdated.

But still the recent developed high tech with MRI, the prenatal measurement of the pelvic, the CTG-predictions about large baby that won't fit through, and some ignorant guys who want to put women into a MRI-machine, laying on their back, to look at birth through it, in real time, pretending that they will then understand better the mechanic of birth are still on the wrong path. This shows that the focus is still on dilation (so much within x time), pelvis as a static part of the mechanism and the perineum. Consistently they overlook or ignore that the main coordination-center for the birth process is the **brain**.

Birth and brain, a tight relationship

Today we know much more about the brain in general (all the neuro-science discoveries...) and it has become a "must" to accept that birth physiology is a chapter of brain physiology. This should change deeply the approach to understand and make human birth easier.

The Brain consists of 2 main parts: which do not collaborate all the time.

FIRST: the **old brain**, the deep **archaic part** that we have inherited from our mammals ancestors millions of years ago. It is the head quarter of "**primitive reflexes**" most of them have a life-saving role or play a role in the forthcoming of the specie to which birthing belongs. It functions partly as a gland.

SECOND: the so called "**Neocortex**", the new large part (new because it has developed along the human history and keeps evolving) highly developed in humans. The Neocortex is the "headquarter" for culture, (language, reading, etc.) behaviours, what is acceptable, what not and how to refrain from. The neocortex has the role to inhibit the primitive reflexes triggered by the old brain, so called **Neocortical inhibition**.

Easy to understand: When the activity/power of the **neocortex** is not yet developed (early age) or shrinks, (ageing, older age, pathologies after traumatic lesions, brain damage) its **inhibitory power** is either not yet existing (in babies) or tends to decline. In specific situations the **inhibitory power** is reduced for example when somebody is drunk or high on

drugs! We can then observe behaviors that are normally/culturally unacceptable for adults (swearing, crying, memory loss, body postures, pee in front of others ...) then we can speak of **impaired inhibition**.

Reduced neocortical control appears as a pre-requisite for easy birth. E.g. the neocortex is at rest. With a poorly developed neocortex mammals do not have our problems. Their primitive archaic reflexes flow without inhibition. An involuntary process like birth cannot be helped, but one can identify inhibitory factors (in all mammals).

This is the pathway to understand the basic needs of a laboring woman. Her needs are the ones that will help put her neocortex at rest so that the primitive brain can perform the archaic reflex of birthing. For that she needs to feel protected against all possible stimulations of her neocortex. The main stimulations/inhibitory factors are the following:

1 - Language: powerful stimulant, product of civilization and culture, what is being said? Questions, explanation (think about the impact of informed consent) questionnaire, professional peer discussion at bed side, suggestions, do and don't, explanations, advices...

→ Need for **silence**, if any: mother tongue or "baby language"

2 - Light: Melatonin, the hormone that flows in darkness is an essential birth hormone; it is an inhibitor of neocortical activity. We need it to fall asleep, to let go. By the way it is now established, that there are **melatonin** receptors on the human uterus and that melatonin works together with oxytocin to enhance contractility of uterine muscles. High melatonin concentration can be found in the blood of neonates, except those born by pre-labor caesarians (protective anti-oxidative properties of melatonin for the baby!).

The so-called short wavelength light or blue-light is the most melatonin **suppressive**. Precisely the light used in conventional delivery rooms! Today it makes even more sense to give birth in candle light!

→ Need: After candle light dinner, and very hype no-light/blind dinner we want to enter anew the age of **candle light birth!**

3 – Observation versus Privacy Feeling observed by (unknown) people or machines (CTG), evaluation of bodily functions, checkup, control, graphs, contractions monitoring, and heart beat etc... and the correlate comments (language) are stimulating agents of the neocortex.

→ Need: **privacy**

Book keeper mentality in the maternity ward where midwives spend an amount of time recording all the data!!!

4 – Fear the scary situation can be provoked by language (be silent!!!) but also by sudden pain, anticipation which is typically human... Any situation which triggers fear is followed by a release of adrenalin/catecholamine, for appropriate reaction (fight or flee) they stimulate in turn the neocortex. **Emergency hormones** are antagonist to birth hormones. WHO has just

recommended to not restricting beverage and food during parturition, both trigger adrenalin just as does fear and feeling cold. All trigger contra productive reactions.

→ Need: **Feeling secure, safe, comfortable**

Résumé

- 1) Neocortex = inhibitor of reflexes, headquarter of culture, control, good girl behaviors.
- 2) Priority: inhibit the neocortex (pre requisits as above)
- 3) Archaic brain takes over --> good reflexes
- 4) Hormone release, des-inhibited behaviors --> safe and quick birth

Recent understanding of brain activity for parturition is challenging 1000 years of tradition!

The anthropologists know well how the cultural conditioning started at the Neolithic age: domination of nature in order to grow food for all has been followed by an invasive domination which transformed the positions, up to then horizontal, into a hierarchic system (human/nature) but also the masculinization (men-women) and later the medicalization, des-empowerment. High-tech toys for boys are the masters that take over and women have to comply with the needs of the machines/computers. The focus on the doers-machines leads to forget that mother and baby are the main actors in the drama of birth. *I.e. long terms consequences on the planet Earth*

How to use childbirth education in this scope? Doula's training

Make women aware of the transformations they are undergoing toward the end of pregnancy: frequently other states of consciousness, loss of memory, sensibility to smells, instead of telling them how to improve their performances at the end of pregnancy, tell them to welcome these sings of increased "neocortical inhibitions" which prepare them for a quick and safe birth!

All this tell them "your neocortex brain works toward a good state for the birth, it slowly reduces its functions in order to let the archaic brain take over for a successful primitive reflex of parturition"

Childbirth education and doula training are at the edge between

- 1) "Informed consent", and silence,
- 2) Ill conducted feeling of safety through instruments/measurements/machines versus self-centered awareness,
- 3) Familiar birth attendant and unknown attendants who triggers questions (mental stimulation)

If only the protection of the mother during parturition could become prevalent!

Birth physiology cannot be improved, the question is more to understand how not to disturb it. (like the farmer in the first part)

Conclusion: In our cultural context, as long as the activity of the archaic brain is not understood, birth will be turned into delivery.

It seems that in some region of the Earth a genuine understanding of the birth process is still persistent without knowing anything of the brain functions. The people of the Aimara in Chili, who live on the Altiplano at 4.500 meters over the sea, have succeeded in protecting their birth culture which has recently been integrated into hospital:

Some characteristics of the parto indígena (indigene birthing): she is covered with traditional blankets and sweats under it, a stove for warmth, room in dimmed light, self-chosen body postures on a normal wooden bed, presence of a traditional midwife of the same group, strong infusion to drink, soft massage, husband at her side. "Push only if you feel like".

All what they ask us for, says the doctor director of the hospital where the "indigene birth" has been successfully introduced, is exactly what the WHO recommends: they want to move, no episiotomies, no lying on their back, be with their family. Respect for their beliefs and traditions. What they ask for is what should be done always.

At the end I would like to mention the use of the rebozo by a traditional midwife aimara within the hospital at the request of the doctor in order to avoid a cesarean: Overdue, baby high up. With the use of the rebozo by the traditional midwife the baby moves down and she gives birth physiologically.

Within ENCA we find numerous advocates: H Agnes Gereb: undisturbed birth and her movies, Spain Angela Mueller architect for birthing rooms, me! Articles and books and you all... present here. I hope... You might in turn check your practice to find out if it is in concordance with the inhibitory factors which I just presented to you.

References:

Michel Odent. The Birth of Homo, the marine chimpanzee. Pinter & Martin. London 2017