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The Clitoris in Labour

by Margaret Jowitt

There's not a "just-so" story in the entire neo-Darwinian oeuvre that currently explains the place of the clitoris in that evolutionary bottleneck of reproduction—birth. The clitoris is said to exist solely to give women sexual pleasure. If this is the case, then it's doing a pretty bad job of it. It's an odd sort of reproductive system that allows women more pleasure from self stimulation than through intercourse with a member of the opposite sex: no sperm to meet an egg, no opportunity for pair bonding. Women's sexual pleasure came a very poor second to the biological imperative to walk upright, which favoured face-to-face mating and put the female pleasure centre virtually out of reach of the penis—which now entered at a different angle.

Upright walking, although it freed the hands for self-stimulation, made the process of birth problematic, too. The pelvis underwent cataclysmic changes, resulting in the infamous "obstetric dilemma": the problem of getting a large-headed baby through a solid, bony elliptical ring and a tortuous birth canal. The human infant also has to pass through a greatly strengthened pelvic floor. Evolution had to fashion a new hammock to support the weight of the contents of the pelvis; the old hammock of the abdomen could no longer take the weight of the uterus and its contents. These were now slung beneath two legs, rather than four.

One can't blame the scientists for failing to see a role for the clitoris in birth. For most of the twentieth century, the internal parts of the clitoris were edited out of the anatomy books, leaving only the external "button." Virtually all birth images show women propped up on their backs to give birth: the clitoris on the outside of the body was surely too far away to have any involvement in birth. However, after initial studies in 1998, in 2005 an Australian urologist, Helen O'Connell, and her colleagues revisited female anatomy and, using dissection and MRI, showed that the external clitoris was merely the tip of an iceberg. The main body of the clitoris runs along the lower edge of the symphysis pubis—the front of the pelvis. Two legs, the crura, anchor it to the pubic arch. The main body of the clitoris finds a way through to the outside, its tip being the clitoral glans. Internally, the clitoris divides at the urethra to form two bulbs (also known as the vestibular bulbs) virtually enclosing the urethra and extending to the side of the vagina.

It looks as though the legendary and elusive G spot is to be found at the lower inside edge of the symphysis pubis. At this location there is a large neurovascular bundle leading to the glans on the outside, which can also be accessed through the vaginal wall and the urethra if enough pressure is applied (difficult for Homo sapiens, who had lost their penile bone). The fact that pressure has to be applied through other tissue may account for the variation in recorded locations for the G spot. So, strictly speaking, the vaginal orgasm is a myth: the G spot is being stimulated through the vaginal and urethral walls, the same nerves that are stimulated from the outside during clitoral orgasm.

What Does This Have to Do with Birth?

The baby plays an active role in birth. First he moves to find what the founding father of pediatric neurology Milani Comparetti called the "invitation of softness"—the cervix, the gateway to the route from the uterus. Then he tucks in his head to present its smallest diameter at the obstetric inlet of the pelvis. Keeping his head tucked in, he rotates to face the sacrum. The back of the head therefore travels down the inner aspect of the maternal symphysis pubis. The fetus moves down and when he reaches the pelvic floor, he extends his head to emerge under the pubic arch. The extending head traversing the lower edge of the symphysis pubis will exert pressure on the internal clitoris. The fetal head pivots when the neck reaches the pubic arch; the pivoting of the fetal head enables the large-headed human baby to compensate for the bend in the human birth canal.

Stimulation of the large neurovascular bundle of the clitoris triggers the Ferguson reflex, which sends pulsed floods of pituitary oxytocin to the uterus. Mothers don't need to use voluntary muscles to push their baby out; their uterus can do it for them. But the activation of the oxytocin surge is not the only function. The neurovascular bundle innervating the clitoris is linked to the levator ani muscles, which contract to enlarge the opening through the pelvic floor through which the fetus must pass. Moreover, contracting the levator ani—which were originally the tail-wagging muscles—may also increase space in the pelvis by allowing the sacrum to move outward. This movement has escaped the pages of medical textbooks; it is rarely seen by doctors attending women who are lying on their backs

A better-known consequence of stimulating the clitoris is engorgement of the vestibular bulbs around the vagina. The crura lining the pelvic arch also become engorged. These cushions of blood may function to protect the back of the baby's head as he is being born—particularly if the mother is in a forward-leaning position.

In a nutshell, the baby does the stimulation from the inside with the back of his head when he's traveled far enough down the birth canal. He will be stimulating the body of the clitoris through the urethra where the clitoris divides to form the crura. This is the legendary G spot. In the right conditions birth is orgasmic!

Ruti Karni-Horowitz's pulsative birth model (2018) describes the active phase of second stage: "The contractions during this phase are usually different than their predecessors in this stage (the active phase). They are known as the 'champagne cork' effect or the 'fetus ejection reflex' ... These are short and effective pressure impulses, accompanied by a slight forward pelvis thrust." I think these may be the very

same pulses that accompany orgasm—the vaginal muscles working by means of peristalsis—normally an attribute of smooth, not voluntary, muscle.

Why has no one noticed this function of orgasm before? The modern way of birth was not designed around female physiology but around the need of obstetricians to see what they are doing. No other mammal gives birth flat on its back with legs in the air, even though all other mammals have straight birth canals. Human birth is complicated by a constricted pelvis, and birth on the obstetric bed adds insult to injury. If the woman is rotated 180° around the axis of her spine onto an all-fours or a forward-leaning position, then the weight of the fetal head will add to the pressure on the internal clitoris, thus allowing the birth reflex to happen and make a larger opening in the pelvic floor.

Improving Birth, Reducing Obstetric Injuries

Obstetric anal sphincter injuries are a major problem in modern obstetrics. The modern way of birth—on the bed, feet in stirrups—puts so much pressure on the delicate tissues of the perineum for the hour or so it takes for the birth to be accomplished by maternal pushing that the tissue is prone to break down; essentially, women can develop pressure sores in this very delicate tissue. Women can be left in great pain and doubly incontinent. If women were allowed to turn over there would be less need for instrumental delivery with forceps or a ventouse, or even caesarean, after the baby has entered the vagina.

The physiology of human birth is still largely a closed book to clinical medicine, which focuses its attention on what doctors can do to expedite birth rather than what the mother and her baby can do for themselves. Unfortunately, the medical wish for control puts women in the worst position possible for birth.

References:

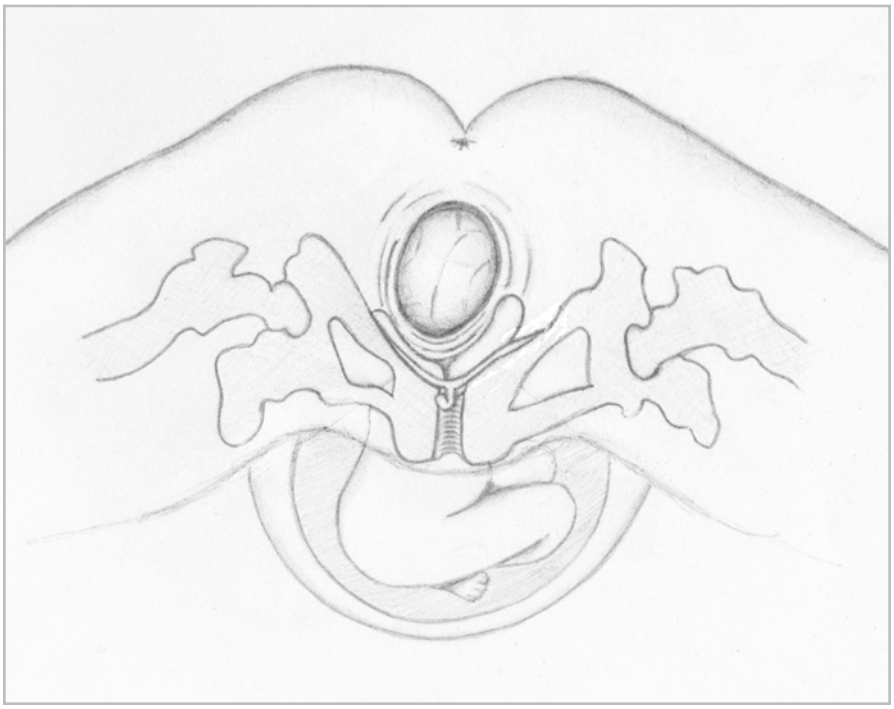
Milani Comparetti, A, 1981. "The neurophysiologic and clinical implications of studies on fetal motor behaviour." *Seminars in Perinatology* 5(2): 183–89.

Karni-Horowitz, Ruti. 2018. "The Pulsatile Birth Model." *Midwifery Today* 125: 48–50.

O'Connell, HE, KV Sanjeevan, and JM Hutson. 2005. "Anatomy of the clitoris." *J Urol* 174(4 Pt 1): 1189–95.

Wickham, S, 2002. "The rhombus of Michaelis, the key to normal birth." *The Practising Midwife* 5(11): 22–23.

Margaret Jowitt came to the birth world as a psychologist, researching the differences between women's experience of birth at home and in hospital. Wanting to know how it worked, she looked at birth from all angles, becoming fascinated with physiology and biomechanics. She recently participated in a *BJOG* debate about the relative importance of electronic fetal monitoring and maternal position in labour (doi .org/10.1111/1471-0528.15026). Her book *Childbirth Unmasked* (1993) looked at psychological stress in labour and *Dynamic Positions in Birth* (2014) considered the biomechanics of birth. Three of her four children were born happily at home in England.



The internal clitoris is beneath the lower inside edge of the symphysis pubis, the apex of the pubic arch—the place where the back of the fetal head must pivot to be born. Jean Sutton talks of "some seriously large nerve plexus" that triggers movement of the rhombus of Michaelis (quoted by Wickham, 2002). (This diagram represents a first attempt by two mothers at amalgamating pelvis, fetus, and clitoris, difficult to render a 3D structure in 2D; please contact the author to suggest improvement. We could not find a picture of the engorged clitoris to work from.)

Hypothesised Function of the Clitoris in a Nutshell

Internal stimulation of the clitoris. A "seriously large nerve plexus," associated with:

- Engorgement of crura and bulbs to cushion fetal head as it falls backwards at the pubic arch
- Lubrication of birth canal
- Mini contractions of the vagina move the fetus downwards
- *Fergusson's reflex—Bolus of oxytocin from anterior pituitary:*
  1. Tonic contraction of the uterus
  2. Flood of oxytocin in the brain ready for bonding
- Postulated nervous impulse to pelvis floor—contraction of levator ani (tail-wagging) muscles:
  1. widening of the exit through the pelvic floor
  2. moving the sacrum outwards