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The Influence of Birth Trauma on the Physical and Emotional Well-Being of the Baby

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Abstract: This article is based on a talk given at Annual Congress of the International Society for Pre and Perinatal Psychology and Medicine, Maastricht, the Netherlands, November 2014. It has been published (in German) in the congress booklet titled *Schwangerschaft und Geburt prägen das Leben*. The article addresses the underlying influence of birth trauma on the physical and emotional well-being of the baby, which may have lifelong consequences.

Keywords: birth trauma, regression, baby body language

The premise of this article is that although the process of being born exerts stress and trauma on babies, it is not necessarily the birth process itself that leads to traumatization. Rather, it is a lack of empathy and understanding on the part of caregivers regarding the impact of birth, which inhibits babies from fully discharging the emotional charge associated with the experience that leads to traumatization. This observation is based on almost two decades of working with babies, children, and adults in clinical practice, as well as attending and later facilitating many workshops and courses aimed at uncovering birth memories through embodied, regressive exercises. The consistency of specific body movements, emotional responses, and—by older children and adults—reported experience indicates the existence of an aspect of human experience which may be referred to as the pre- and perinatal realm. This xhas yet to be integrated into mainstream psychology, science, or public awareness. Because of this lack of awareness, babies have to hold their experience on their own. We might say that babies have to bear the burden of our cultural shadow, which, as I hope to show, is a deep insult to their integrity as sensitive, feeling, relational beings.

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During birth, babies are under a lot of stress due to the pressure being exerted on them by uterine contractions and by the bones of the maternal pelvis on the fetal cranium (Janus, 2001, p. 51-57). At various times babies experience a great deal of disorientation and pain. The longer babies are under stress, the more likely they are to experience this as traumatic. Stress, if it is short lived and leads to positive outcome, does not impact us in a negative way. Stress mobilizes us to act. Babies are very active in their own births and stress is a natural motivator in this. Under stress the sympathetic nervous system is activated and stress hormones, such as adrenalin and noradrenalin are released. We only experience stressful situations as traumatic if our coping threshold is overwhelmed. Trauma leaves us "altered and disconnected from our bodies … we feel utterly helpless and hopeless" (Levine & Klein, 2007). When a situation turns from stress to trauma we are flooded with stress hormones, and in this hyper-aroused state our physiological imperative is the overwhelming drive to survive. If the trauma is intense or long enough we may go into a hypo-aroused state, sometimes known as parasympathetic shock. In this state, our bodies produce painkilling endorphins and we dissociate from our physical experience. We become frozen and immobilized.

If we are unable to move out of states of hyper- or hypo-arousal or long-term stress, our neuroendocrine levels will constantly be activated, as if we were still in the original stressful or traumatic situation (Haines, 2016). This results in a trauma state. If the levels of activation are able to drop so that our coping threshold is neither overridden nor stressed, then we are not traumatized, even if the situation we encountered was traumatic. Birth is both stressful and traumatic. Throughout labor and birth, babies may feel as if they are going to die, for example, if their oxygen supply is cut off as contractions compress the cord or the cord is wrapped around the neck. If they are flooded with analgesics given to the mother or crushed by the unnaturally prolonged and intense contractions produced by augmentation or induction drugs, this can also feel life-threatening. Babies can also feel empowered if they are able to encounter the stresses and traumas of birth and successfully navigate their way through. However, this success does not depend on having simply survived the *event* of birth, but on having integrated the *experience* of birth in such a way that the baby is no longer cycling in states of hyper- or hypo-arousal. My experience in clinical practice is that babies who have fully integrated the experience of birth in this way develop a sense of relaxation and resilience. Parents report a variety of changes that they notice after sessions, such as improved sleep, less "fussiness" or "agitation," greater contentment, a reduction in recurrent chest and ear infections, and easier feeding. Other less definable changes, such as the baby "seems more

available for contact" or "seems more present," or to be "more himself" or herself" are also reported. Having the possibility of a "second chance" to move through the dynamics of birth seems to provide the foundation of an underlying sense that "I can encounter difficulty and overcome it." But babies are usually not able to integrate the experience of birth on their own. They need the empathic support of people, ideally their parents, who know what they have been through.

Babies Tell Their Stories

According to the child psychoanalyst, Alice Miller, "It is not the traumas we suffer that make us emotionally ill, but the inability to express the trauma" (Miller, 1984, p. vii). In the case of babies and infants, it is not their inability to express the trauma that is the problem, but our inability as parents, caregivers, and professionals to see, hear, and empathically respond to what is being expressed. Because babies are not able to express themselves with words, we tend to disregard their experience. Present day medical science reinforces this by telling us that babies do not remember the pain of birth (Castro, 2014). Clinical experience of working with babies (and adults who access birth memories either spontaneously or through birth simulation exercises) tells us that this theory is not only incorrect, but is in itself traumatizing, in a similar way to the denial of memories of sexual abuse was in the past.

Babies carry the memories of the pain of birth in their bodies as lived experience, which may become reactivated after birth and throughout life. They tell us about it, not in words, but through "memory crying" and "baby body language" (Karlton Terry, personal communication). Most parents and professionals are aware of "needs crying" by which a baby is expressing a present moment need, such as hunger, cold, boredom, tiredness, or the discomfort of a wet diaper. There is almost no awareness that babies also cry because they are "remembering" their birth. This is not remembering in the sense that we may remember what we had for lunch yesterday, but is a *felt embodied experience* of what it was like during the birth. Babies remember exactly where in their birth their coping threshold was overwhelmed. Until such time that this traumatic experience is integrated into the baby's ongoing experience of self, the trauma has a life of its own, which operates within both psyche and soma. I use the term "self" here to indicate a continuum of embodied experience, rather than the more formed ego that emerges out of this embodied experience. From a more exact ontological perspective, we might use the term "being," rather than "self." But as the dynamic ground of our being-nature is the living foundation from which the sense of ego forms, I use

the term "self" as an emergent, rather than fully formed psychological structure. At the somatic level the trauma manifests as hyper- and hypo-arousal of the neuro-endocrine system. At the psychic level it expresses itself though strong emotions, along with existential themes associated with the will to exist and the fear of annihilation. Memory crying tends to express three essential emotions: anger/rage, anxiety, and sadness/grief. We can hear these themes in the emotional tone of the crying and see them in the accompanying emotional expressions.

There are two types of baby body language (Terry, 2010, p.10). These are "fixed" and "active." Fixed baby body language includes conjunct sites and conjunct pathways. Conjunct sites are areas of compression that are left over from where the baby (mostly the baby's cranium) was up against (in conjunction with) the mother's cervix or a pelvic bone for a long time. Conjunct pathways are pathways of compression and stress that were created by being painfully pushed (by maternal contractions) or dragged (i.e. with forceps/ventouse/c-section) over a maternal bone. One of the most obvious examples of fixed baby body language is what is called the "birth lie side." This refers to the side of the baby that was closest to the maternal spine. In the last few weeks of the pregnancy and during labor this side of the baby, which may be left for some babies and right for others, tends to be more compressed, especially in relation to the maternal lumbo-sacral promontory (LSP), a thick mass of bone, located where the lumber spine meets the pelvis (Sills, 2004, p. 286). The birth lie side is usually obvious as that side of the cranium is more compressed. The eye, on that side, is closer to the nose and slightly lower than the eye on the other side (in cephalic presentations) as the eye has been compressed medially and dragged inferiorly as the baby's head passed over the LSP. There also tends to be more tension and nerve activation, due to compression of the peripheral nerves, on the lie side.

Active baby body language consists of repetitive, spontaneous, but meaningful movements, such as the touching of conjunct sites and tracing of conjunct pathways. These are very specific and reveal exactly where in the birth process the baby felt stuck and overwhelmed. In baby therapy sessions, babies will often take the therapist's hand and pull it into contact with the conjunct site or pathway. They will indicate the exact pressure they need to meet the compression that they are feeling in the body. Babies, like anyone else, contract against pain and this contraction holds the compressive forces in the tissues of the body. The right level of pressure along with the right empathic response to the baby's "story" allows the body to relax the contraction and release the compressive forces that have been held there. Babies know what they need to do and they need us to know as well so that we can support them.

Baby body language and memory crying usually co-arise as a unitary process. The body language shows us where in the body the memory is held and at what stage in the birth (or prenatal life) the memory is located. A knowledge of the different stages of birth from the baby's perspective enables us to match conjunct sites and pathways to the different pressures exerted as the baby passes through the pelvic inlet, mid-pelvis, and pelvic outlet. Some baby body language may also refer to prenatal experiences and post-natal procedures. As such, baby body language is very specific and is universal, albeit reflecting the different cultural contexts within which gestation and birth occur. The emotional tone of the memory crying, along with facial expressions and the emotion conveyed through the eyes, tell us how the baby experienced this event. By these means babies tell us their stories. The role of the baby therapist is to hear the story and empathically mirror it back to the baby. This includes mirroring the body language and emotional expressions, accompanied by verbalizing what is being expressed. This may be something like, "I can see how hard it was for you as you were trying to rotate in the mid-pelvis. That really hurt, didn't it?" Or "you were doing so well, you were nearly there, when those forceps grabbed you and yanked you out." The more accurate we can be in reading the body language and attuning emotionally to the baby's story, the less likely we are to project stories onto the baby. For the most part, when we are working with babies and their families, we do not know what needs to happen. It is only when the bit of the birth that the baby wants to work with clarifies, through the baby's body language and memory crying, that we can engage with mirroring and other supportive processes.

When babies *feel* that their story is being listened to and appropriately responded to they recognize it as an opportunity to fully release the emotional charge associated with the birth memory. This means that the intensity of the emotional expressiveness increases before it decreases. When a baby memory cries, it is often mistaken for a needs cry and the baby has a breast or bottle shoved into the mouth or is told to "shush." Whilst this is done with the best of intentions, there is a mismatch between what the baby is experiencing and how the world responds. At first babies may protest and struggle against such interventions, but after awhile they give up on themselves and surrender to the inevitably of not being understood. The assumption is that a quiet baby is a content baby and quiet babies are often referred to as "good babies." This can lead to what I call "Good Baby Syndrome," wherein a baby has learned to diminish his or her need for authentic emotional expression and has become resigned to not being understood.

Yet it is only through empathic listening and emotionally attuned mirroring that babies are able to release the emotional charge associated

with birth trauma and down-regulate their neuroendocrine activation. Imagine this scenario: You have had a very stressful day at work, maybe your boss or a client was very aggressive towards you. You feel agitated and upset and when you arrive home you try to tell your partner. Instead of listening, your partner tells you "shush, it's fine, you're ok" or thrusts a sandwich into your hand telling you, "you must be hungry, that's what's wrong with you." Instead of this calming your agitation, you would initially feel angry, but after time would give up on being heard. You would become resigned to not being understood. Imagine another scenario: Your partner really listens to you and is deeply empathic to what you are feeling. As you tell your story you feel the emotions deeply, you might cry or feel your anger more fully as you recount what has happened. Afterwards you feel calm and relaxed, with a deep sense of satisfaction that you have been listened to and understood.

It seems to be the same experience for babies. When they feel we are deeply listening they tell their story more fully. The memory crying often becomes louder. But it is the releasing of the traumatic experience, rather than a railing against not being heard. There is a very different quality to the crying. But it is not always easy for parents (or indeed many therapists) to tolerate the intensity of memory crying or to fully trust in its therapeutic value. For most parents memory crying and baby body language are new concepts and they may be understandably skeptical. Their own unresolved birth trauma, and history of not being listened to, will also be stimulated, so that their tolerance to hear their baby's pain may be quite low. Educating parents to understand the value of memory crying helps them to trust the process and deepen their empathy for both their baby and themselves. Working within, rather than overriding the capacity of parents to tolerate the emotional intensity of memory, crying creates a safe context in which babies' birth stories are able to unfold and trauma can resolve. Once the story has been empathically listened to, the baby body language and memory crying greatly diminishes and mostly disappears, as the process that the baby felt stuck in has now been completed. This enables the baby to move from a state of traumatization to a newly found quality of resilience.

Emotional Attunement: Mirror Neurons and the Electromagnetic Fields of the Heart

Babies feel when we are emotionally attuned to their experience and when we are not. The more we bring our own prenatal and birth experiences into consciousness and resolve our own trauma, the more present and empathic we can be to babies. We cannot support babies from

a theoretical basis alone. The work of supporting babies asks of us that we face and work with our own split-off and disowned emotional pain before we can authentically empathize with their stories. Babies are usually far more emotionally attuned with us than we are with them. This is largely due to how we have been educated to override our instinctual and intuitive selves, being governed instead by theoretically-shaped cognition. In doing so we have closed down our senses, while babies' senses are very open and their lived embodied experience is informed from moment-to-moment as to how emotionally attuned we are with them.

We still have a lot to learn about the specific mechanisms by which babies attune to the nuances of relationship. Recent discoveries in neuroscience and electrocardiography may give us some clues. The presence of "mirror neurons" was discovered in the 1990's by researchers studying rhesus monkeys (Gallese, Ferrari, & Umiltá, 2002, p. 35-36). These mirror neurons are thought to be neurons in the brain that fire in relation to observed actions and expressions by another person. As such, the mirror neuron system is active in our ability to empathize with others, as it enables us to *feel* what another person feels though observing their body language (Murray, 2014; Childre, Martin, & Beech, 1999). It is via the mirror neuron system that babies are able to imitate the facial expressions of others. An example of this would be when a baby copies an adult when they stick out their tongue. It could well be that these mirror neurons are "two-way mirrors," whereby when the babies body language and expressiveness is mirrored back, they feel that we are emotionally attuned and empathic with their felt experience. Clinical experience shows that babies know when we are and when we are not emotionally attuned to them. Mirror neurons may be just one of the means by which they are able to detect this.

Another possible means by which babies seem to read our minds may be through the electromagnetic field of the heart. Electrocardiogram (ECG) readings reveal that the electromagnetic field of the heart is much larger and much more powerful than the electromagnetic field of the brain (Childre, Martin, & Beech, 1999, p. 33). There are three separate fields of the heart, corresponding to the three phases of the heart, that have been detected by ECG: the first extends only a short distance from the heart; the second and strongest of these fields extends out about three feet; and the third reaches out to between 12 and 15 feet. Other larger fields are also believed to exist. These fields interact with each other and also with other heart fields around us. The heart field of a baby's family forms a dynamic interactive gestalt in which babies are emotionally embedded and actively engaged. The interaction of the heart field of a mother and

her baby are especially important and most strongly active at the frequency of the field that extends to three feet.

The heart field of the mother reflects her emotional state. Coherent waves occur when we feel love, joy, and nurturing in relationship along with other positive emotions. These expansive coherent frequencies resonate and entrain with other coherent frequencies in the environment. This reinforces coherence and the interactive heart fields of a coherent relational field create a stable energetic holding within which babies feel safe and known. If parents, especially mothers, are experiencing negative emotions such as fear, frustration, or pain, the frequency of the electromagnetic field becomes incoherent. Incoherent waves do not radiate out to the environment in the same way that coherent waves do. They cannot synchronize with other waves, which is what makes them incoherent. Because these frequencies inhibit the capacity to interact with other heart fields in a coherent way, babies and their parents feel isolated and out of synch with each other. If the baby is experiencing incoherence the mother's heart can help the baby's heart re-establish coherence. The mother's heart entrains with the baby's heart and her coherent frequencies lift the baby out of incoherence. Entrainment occurs when the frequencies of the hearts of mother and baby match. Entrainment equals empathic emotional attunement and is a measurable phenomenon. Coherency and entrainment maintain a sense of relationship and safety for babies (Childre, Martin & Beech, 1999, p. 229-230).

Dissonance and Attachment

When a baby memory cries and cannot be consoled it creates a great deal of distress and frustration for parents who are trying to do their best. Because they are responding to it as if it were a needs cry the baby's distress escalates. This in turn generates parental distress and frustration. Instead of the coherence of the parents' heart-fields pulling the baby out of incoherence, the baby's incoherent heart-field draws the parental heart-field into incoherence. A cycle of frustration and distress becomes the norm for both baby and parents. Relationships become tense. It is hard to find pleasure, comfort, or meaning in relationship. The whole family is operating at the level of survival, rather than thriving. Feelings of failure and guilt compound parental distress. Tempers fray. The relational field is permeated by shock and despair. It becomes dissonant, rather than entrained. Dissonance, in this context, is the absence of emotional resonance and empathic attunement is not possible.

Dissonance disrupts bonding and attachment, disrupting what is often referred to by clinicians as the First Year Attachment Cycle. This

cycle begins when a baby feels a need. As babies are unable to satisfy their needs on their own, they become sympathetically aroused. If the need is gratified, the baby feels relief and relaxes. The repetition of this experience creates a foundation of trust in relationship and the world as being places where needs get met. An example of this would be: the baby is hungry, cries and is fed. Satiety brings relaxation. If the need is not met, the baby becomes increasingly distressed and overwhelmed. If it goes on long or often enough the baby collapses into resignation and trust in relationship/the world is lost. Neither relationship nor the world is experienced as safe. As we saw earlier empathic mirroring of babies' stories is also a need, and insofar as this need is met, the attachment cycle is positively reinforced. Insofar as it is not met the cycle is negatively reinforced. In the latter case the baby's emotional expressions seem incoherent to the parents, i.e., "I have tried feeding, rocking, distracting, nothing seems to work," and the parents' responses are incoherent to the baby. This throws the baby into an incomprehensible world in which nothing feels safe or trustworthy.

When parents are able to understand that their baby's emotional expressions and body language are not random, but are intelligent and meaningful, they can appreciate their baby at a much deeper level. Babies feel this and become more embodied as they trust that their inner sensations and the response from the environment are coherent and meaningful. The baby who is embedded in a coherent relational field is able to relax more fully into the experience of being here. There is more of a sense of presence, as the baby is not caught up in a past trauma or so flooded by stress hormones that the only viable option is dissociation. A coherent heart field supports the growth of the prefrontal lobes (Pearce, 2007, p.115-120). These neural structures enable us to regulate emotional reactions and to control impulses and survival responses. Well-developed pre-frontal lobes are essential to our capacity to regulate stress. The sense of stability and security that babies feel and which becomes laid down in their neurology, informs and supports all subsequent stages of bonding throughout the rest of life.

The Effects of Unresolved Birth Trauma

As we have seen, unresolved birth trauma has a number of effects which compound the original trauma and increase the likelihood of traumatization. In the short term, spiraling cycles of distress lead to inconsolable crying (insofar as the real cause of the crying is not recognized and appropriately responded to), feeding problems, fractiousness, and disturbed sleep. These, in turn, disturb bonding and

attachment, leading to existential anxiety and even terror, insofar as babies do not feel held in a secure, coherent relational field. When babies' memory cries and their inner experience are not met in a meaningful way by their caregivers, there is increased frustration and bewilderment. Rather than expand out into an incoherent and dissonant environment, babies contract into themselves. They may also be experiencing physical discomfort and pain due to the compressive forces still held in the tissues of the body. This is accompanied by the emotional pain that lingers from the birth itself, as well as that of not having the birth story recognized and empathically engaged with.

Later in life this will lead to the formation of what I call *Super Conductive Survival Systems.* A Super Conductive Survival System is a cluster of responses to a present moment stress stimulus that is similar to an earlier prenatal or birth trauma. It is a system in that it has a life of its own and hijacks our awareness and our usual capacity to respond. It is survival-based, as it evokes behaviors that helped us to survive when we encountered the original trauma. It is super conductive, as it conducts trauma-based energies (i.e. bioelectric and biochemical) in the same way that water or metal are super conductive to electricity. A super conductive survival system consists of:

- The activation of dense neural pathways.
- Flooding of the body with stress hormones, leading to hyper- or hypo-arousal.
- Diminished consciousness and possibilities, as we are being run by primitive survival strategies, rather than inspired by creative choices.
- Inappropriate behaviors, such as rage, fear (the 'fight/flight' response of hyper-arousal) or terror/dissociation (the 'freeze' response of hypo-arousal).
- Distorted perception – we experience threat where there is none.
- Self-limiting beliefs, such as "I can't do this" or "I never handle these kinds of situations well."

Early childhood trauma has been shown to overexcite the limbic system, the primitive midbrain region associated with emotion and memory. This is done by the formation of dense neural pathways, which are geared more towards survival-based behavior than the higher brain structures, such as the pre-frontal lobes, which are associated with emotional regulation and relationship.

The following scenario is an example of a Super Conductive Survival System, which might be associated with someone who was born by forceps.

They are struggling to finish a project and someone offers to help. This is the present moment stress stimulus that echoes an early trauma. The offer of help is experienced, as the forceps were, as painful, invasive, and manipulative (distorted perception). The activated person becomes angry and shouts at person who has offered help (inappropriate behavior). The limbic system becomes over-excited and adrenaline production increases (activation of dense neural pathways and flooding of stress hormones). The over-stimulated limbic system and adrenal surges hijack awareness (diminished consciousness/possibilities). The present moment physiological response is that of the baby encountering the forceps again. This may lead to shame and the sense that "I'm not a good person to be around" (self-limiting belief #1) and, more-unconsciously, "It's not okay to get help" (self-limiting belief #2). This is a generalized example. Not all babies born by forceps are going to have these same responses.

Summary

The denial of babies' experience of stress and pain in the birth process means that it does not get adequately addressed early in life. Memory crying and baby body language are ways in which babies convey, in a very specific manner, what their experiences of birth were like. Because babies do not get the empathic support they need to resolve their birth trauma they have to hold their painful experiences on their own. This keeps them cycling in distress, disrupting bonding and attachment, and leads to the formation of super conductive survival systems, which undermine self-esteem and well-being later in life. There is much more that could be said about the psychological and physiological consequences of unresolved birth trauma, which are beyond the scope of this article. I have focused here on the relational aspects of missing how babies convey their birth stories, and how this reinforces trauma, leading to traumatization, rather than resolution and resilience. As I write this I am aware that, although the ways of working therapeutically with memory crying and baby body language are being taught, there are still only a very small number of practitioners working with babies in this way. However, it is my belief that we have to take the long view and that only by acknowledging this lack can we begin to address it, through therapeutic and educational means.

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