Out of the Dark: Embodying Our Original Embryological Potential

Cherionna Menzam-Sills, PhD

Abstract: What great intelligence guides our formation? What happens to that amazing original potential and how can we recover it when life conditions have occluded it? This article explores how our psychological development may be affected by conditions we meet, like being received and welcomed, or not, within familial, cultural, and ancestral contexts. The concept of psychological shadow is applied to pre- and perinatal experience that is so often denied. Specific embryological milestones are considered in relation to how conditions may affect the psyche and how we might return to our sense of wholeness and original potential.

Keywords: embryology, prenatal psychology, shadow, potential

In the beginning, we are but a tiny speck, a unicellular organism known as a fertilized egg, ready to become. From this apparently humble starting point, we develop remarkably complex bodies with cells of many types. How do we do this? What great intelligence guides our formation? An equally important question is: What happens to that amazing original potential and how can we recover it when life conditions have occluded it? It is useful here to consider the idea of psychological shadow, a term derived from Jungian psychology (Jung, 1953/1966). Shadow refers to an expression of the unconscious mind. Shadow aspects are parts of us we deny, repress, and are not aware of. Often these relate to feelings of badness. Consider the following trajectory of experiences from this Jungian shadow lens:

Cherionna Menzam-Sills has taught embryology through movement since incorporating it into her doctorate in Pre- and Perinatal Psychology in the 1990s. A somatic pre-/perinatal psychotherapist for almost thirty years, she also teaches Craniosacral Biodynamics and Continuum, a mindful movement practice. Currently senior tutor at Karuna Institute, she has taught graduate students at Naropa University and Santa Barbara Graduate Institute, and has authored *The Breath of Life: An Introduction to Craniosacral Biodynamics* and the soon-to-be published *Spirit into Form: Exploring Embryological Potential and Prenatal Psychology*. She can be reached via her website at www.birthisngyourlife.org or her online school at www.resourcingyourlife.org

Perhaps your parents reacted with horror or terror when they discovered they were pregnant with you. You then identify with that rejection, feeling unworthy, unsafe, unwanted. These feelings are intolerable and do not attract the acceptance you desperately need in order to survive. You learn to protect yourself from further rejection by being exceedingly cooperative, smart, well-groomed, perfectionistic, self-critical, and/or cheerful. While all of these may be useful characteristics, they come at the cost of your authentic feelings. Somewhere inside, you still feel unwanted and incapable of ever being loved. You may project this quality onto others whom you perceive as unworthy, not good enough, unlovable, or even too smart, too perfect, too cheerful or too good-looking.

Even if nothing so extreme as rejection met us in our early lives, at best our parents as human beings tend to be inconsistent. Mother can't always be 100% there for us. We may learn to repress feelings that arise when we are not acknowledged, received, and met as we need to be. If we have good enough parents who are mostly sensitively present for us, our shadow may be less intense than if our parents were narcissistic, mentally ill, addicted to work, love, or substances, or simply highly stressed.

Notice what happens in your body as you read this. If something here feels uncomfortable, we may be touching on shadow material. If you happen to be a parent who wasn't perfect in every moment (!), can you take a moment now to forgive yourself? The good news is that the challenges we and our children face can make us stronger, wiser, and even more resilient if they are not overwhelming, or if we can revisit them with gentleness and support. Acknowledging shadow and its causes isn't about blaming anyone. Rather, our intention here is to return to wholeness—to integrate aspects of ourselves we may have rejected or repressed because of early perceptions and experience. Our original potential may have become hidden in shadow if we needed to protect it.

Pre- and Perinatal Sources of Shadow

It seems to me that our early prenatal and perinatal experience is almost *by definition* shadow material. We all have experiences long before our brain and nervous system is fully developed, but in our modern, Western world, that experience tends to be unseen, unheard, and unacknowledged. When toddlers innocently speak about their time in the womb or during birth, or even before conception, those around them may consider them cute, but not believe them. When children learn how to walk or speak their first words, everyone celebrates. When they talk about their pre- and perinatal experience, they are often hushed or even punished. Fortunately, awareness of early experience is spreading and such stories are perhaps more readily received with curiosity and interest.

Even so, they frequently differ from responses given when a child recounts a trip to the zoo, where parents ask questions or help fill in details. "*Yes, and remember when you saw the stripes on the zebra?*" How often does this happen with prenatal or birth memories?

Preverbal memories are implicit, felt memories. Verbalizing them can enable their integration into conscious, explicit memory. When children tell a story and are encouraged to continue, the memory they are conveying becomes more consciously available. If they are discouraged, it tends to go into shadow, lingering in the realms of the unconscious. The felt sense of the early experience persists, but without conscious reference or meaning. For example:

> *The feeling of* being wrong *when my parents are upset about me being the undesired sex can persist for life without me knowing why. The anger or sense of helplessness when the doctor pulls my drugged body out by forceps may gnaw at me for years, having no vehicle of expression because the context is missing. I just feel that way. I don't know why. I must just be an angry person. I may feel it most around authority figures, like teachers, parents, doctors. The angry feeling may become part of my personality or I may become passive-aggressive, denying I am angry, although others sense or see it clearly.*

While these are generalizations, and every individual will have their own lived experiences and beliefs, these early influences may feed the very roots of our identity. Being part of such an intense experience as birth, the feeling can be very strong and have immense effects on my sense of who I am.

Recovering Lost Potential

Within a culture that does not revere birth, but instead sees it as an illness to be medically controlled, birth trauma is unnecessarily common for both mothers and babies, as well as partners and other family members. In the modern, Western world, birth, like death, is isolated and feared. I have encountered too many young mothers who were terrified of an upcoming birth, having never seen one before. Others go bravely marching into the hospital, innocently expecting a natural, easy experience, emerging shocked and traumatized by what actually happens, perhaps even suffering from PTSD or postpartum depression. Where is the potential here? Has it been lost?

Let's take a moment to consider the enormous potential of birth. Like other developmental milestones, both in the womb and throughout life, birth presents challenges. When not overwhelming, we not only survive, but have the potential to learn and grow from meeting each challenge. If you feel at all activated reading about birth, it may be helpful to remind yourself that you *did* survive that time! For the baby, birth is an aspect of

an original potential to come into form. Parents also pass through a developmental portal as they enter parenthood.

Babies, as intelligent, sentient beings, have the ability to find their way out of the womb. Being supported in their journey can foster a sense of *rightness*, knowing their own timing, their own rhythm in relationship, their own authority and increased autonomy as they begin to breathe and move outside the womb. Babies initiate labor when they are ready (University of Texas Branch at Galveston, 2016). They respond to support and guidance from family and birth assistants and can be remarkably cooperative. For example, explaining to a baby in a breech position the consequences of coming this way and how much easier it would be if they turned, often leads to the baby turning, avoiding potentially risky interventions. Given a chance, babies engage in a collaborative dance with the mother, as they push and rest together through labor.

Compare this to the medical model, where birth is a medical condition to be fixed. It is directed and controlled by an external authority. Without the opportunity for inherent bio-intelligence to guide the process, technical assistance is often required. The body is seen as a machine. The baby is the "product" of the birth. Medical interventions, although gratefully capable of saving lives when needed, can have lifelong influences, affecting one's sense of timing, and one's ability to complete tasks, trust oneself, and feel welcomed. Both babies and mothers often emerge traumatized, perhaps physically injured and in pain, affecting postpartum bonding, breastfeeding, and relational and developmental tendencies.

How does your body react to that? Is it different from imagining a gentle birth in the familiar surroundings of home, supported by midwives who have caught hundreds of babies, with a loving partner and family quietly helping? How we experience birth may be reflected in these questions:

How calm, grounded, and present am I as I start new things?

Do I perceive/receive support in transitions? In life?

We can return to the original potential, even when it has been trampled on by fear-based over-medicalization. It can also be retrieved in those relatively rare situations where conditions are too much and medical intervention is essential to save lives. It is never too late to orient to our potential. This may begin by acknowledging when it has not been fulfilled, and trauma has occurred.

Return to Wholeness and Potential

It may be helpful to consider more explicitly what is meant by potential. I often speak of our original embryological potential. As little ones, we begin as a tiny, unicellular organism, ignited by the union of

sperm and egg. As Jill Purce (1974) states in her beautiful book, *The Mystic Spiral*:

> We begin our lives, as it were, a point: a tiny fertilized egg. In mathematics, the point has location, but no dimension. Having no dimension, it is total possibility, and since it may expand equally in all directions, it is necessarily the center. When we magnify or 'expand' this point, we find that our fertilized egg has become a sphere. Our goal is to return to the sphere; the sphere of psychic wholeness. (p. 13)

We begin as "total possibility." How does that original unicellular organism know how to expand and develop the complex physical bodies we all have? There is incredible potential available in the beginning.

The cells of the early embryo are "pluripotent," meaning they have the potential to develop into any kind of cell in the body. Something guides them in their process of multiplying, shifting their shape and migrating through the developing embryo. They are in communication through resonance with other cells, as well as with their larger "outer body," including the mother's body and her greater field of support. Familial, community and cultural values, beliefs, and mores all affect the little one's development, both before and after birth.

Babies in the womb are preparing to live in the environment they will be born into. Intelligently, they are sensitive to their mother's perception of safety and support, or threat and lack of support (Lipton, 1998). Ongoing or extreme maternal stress is associated with their babies having altered levels of cortisol, an important stress hormone (Sarkar et al., 2019). These little ones are often born extra-sensitive to stress, expecting it, and ready to perceive it when it comes. Unfortunately, being ultrasensitive to stress often leaves babies less able to cope with it when it does arise. Children gestating in mothers with high or ongoing levels of stress have an increased risk of developing anxiety, ADHD, conduct disorders, depression, and mental illness (Brannigan et al., 2019; Glover, 2011). This knowledge poses concerns for children gestating during the COVID-19 pandemic and underscores the importance of providing support for pregnant mothers and families (McGill University, 2020).

Cell biologist, Bruce Lipton, (1998) points out that cells respond to their environment, withdrawing from perceived threat, and opening to receive nourishment. As organisms, we can either be in a fear/withdrawal state or a love/growth state. Like cells, we cannot be in both at the same time. Babies growing in a field of chaos, violence, and disharmony tend to be born smaller than babies exposed prenatally to more harmonious, peaceful, loving contexts (Nathanielsz, 1999). Resulting epigenetic changes on a cellular level have been found to be expressed in later generations (Nathanielsz, 1999; Scrutti, 2014; Yehuda & Lehrer, 2018). For example, children and even grandchildren of Holocaust survivors may

demonstrate similarly altered stress sensitivity (Rodriguez, 2015). Evidently, their ancestors' traumatic experiences become an aspect of the outer body these descendants develop in.

Trauma versus Potential

Trauma before and around the time of birth is unfortunately not unusual. Not only does maternal stress have a profound effect on the little one, but prenatal stress and trauma can be overwhelming for a baby. Prenates are completely dependent on their mothers for essential nourishment arriving via the umbilical cord. The term "umbilical affect," originally coined by Francis Mott (Maret, 1997), refers to maternal feelings or emotions (affect) coming to the baby via the umbilical cord, although umbilical affect may also be considered to extend through infancy when mother and baby are like one unit. Babies receiving primarily feelings of love and contentment can thrive in the safety of their mother's internal world. Where mothers are stressed or otherwise emotionally disturbed, babies are likely to experience difficult umbilical affect and encounter a double bind. They depend on what is coming in umbilically for survival, but if they open to receive it, they also receive toxic or negative umbilical affect they naturally want to withdraw from. There is no solution to this dilemma.

I have frequently heard pre- and perinatal psychology pioneer William Emerson (2002) declare that anything less than celebration about a baby's existence when discovered can be shocking for the little one. This discovery tends to occur around the fourth week after conception, although modern pregnancy tests can be conducted earlier, and some parents are aware the moment their baby is conceived. The fourth week marks an important milestone in embryological development. The embryo enters the fourth week as a relatively flat, three-layered disc with a cardiogenic (heart-generating) region emerging near the top or cranial end. The tissue destined to become the central nervous system then begins to grow over the cardiogenic area, as the embryo folds into a more three-dimensional form, where the heart meets an energetic heart center and miraculously begins to beat. The little one begins to resemble more of what we are used to considering as a body. I have heard that some spiritual traditions consider this the time when the soul or spirit enters the body. There seems to be more of a body to enter into.

In that this is also the time when the pregnancy tends to be discovered, this embryonic folding and heart ignition can occur within a field of celebration or one of rejection or ambivalence. The shock of potential rejection can affect heart development and tends to be held in the tissues developing in this area. For example:

> *How many of us walk through life hanging our heads, chest collapsed, breath shallow, haunted by feelings of shame, rejection, inadequacy, or unworthiness? Alternatively, unacknowledged feelings of the little one from this important phase of life in the fourth week may be disguised by the opposite posture of tightly pushing the chest forward, the chin up, and keeping the breath still and shallow. There may be a sense of needing to prove I deserve to be here. The underlying feelings lead to a life stance of arrogantly proclaiming to be better than everyone else, to avoid feeling the intolerable truth: My existence wasn't celebrated.*

In that many conceptions are not planned and happen with an alarming degree of unconsciousness, under the influence of drugs, alcohol, or external pressure, discovery is too rarely celebrated. Even if the parents are clear about wanting a child, they may be surprised when one comes along. I have met so many mothers or couples who had been planning to have their dream trip to Asia before conceiving, or were waiting to have more secure income, a more established relationship, better living conditions, or just to live a bit more life first. Or sadly, they may have had a previous miscarriage and their fear of losing this child obscures their welcome. When discovery is not celebrated:

> *The little one may feel life is in danger and this is shocking. For the baby completely dependent on mother for survival, her rejection is dangerous. Although the body may be more of a place to live in after embryonic folding, a field of rejection or ambivalence is not inviting. When discovery is not celebrated, little ones often have difficulty fully embodying.*

Conception within a field that is other than loving and safe can also result in a tendency to move through life in a relatively disembodied way. This is reminiscent of a character James Joyce (1967/2014) described in *Dubliners*, "Mr. Duffy lived a short distance from his body" (p. 89). This tendency to not be present can also relate to anaesthesia or trauma at birth. These developmental milestones can also affect our ability to feel welcome where we are.

How we are received and welcomed at birth can affect our experience of our ability, willingness, and right to be here in life. Questions about wanting to be here may manifest as "Divine Homesickness," a desire to go "home" to spirit or source, or "Divine Betrayal," a sense of having been betrayed or tricked into coming—concepts I have often heard William Emerson (2002) describe. A surviving twin, for example, may feel they had agreed to come if their twin accompanied them. Then, as soon as they were firmly enough established in a body, their twin left, leaving them to cope with life alone. Conception-related questions include:

Am I welcome here?

Is it safe to come into being?

Do I belong?

Can I be here–in a body?

Do I want to be here?

Implantation, Loss, and Grace

Consider that every developmental stage in life involves challenge (Van der Wal & Van der Bie, 2005). Meeting the challenge enables us to grow and evolve. If the challenge is too much, we can be overwhelmed and unable to embody the potential of this stage. While embryonic folding and discovery of the pregnancy mark an important milestone, the embryo being discovered has already been through other major milestones, including conception and implantation. We have already seen how the nature of conception can affect how discovery goes. By seven days after conception, the embryo needs to implant in the uterine wall in order to access the nourishment required to continue life and development.

Implantation marks the first moment of actual physical contact with the mother. It is facilitated when the uterine wall is thick, plush and soft, and readily opens to welcome the little one. Trying to implant at the wrong time of month when the endometrium is not thick enough is unlikely to succeed. Implantation can also be affected by maternal feelings about being pregnant, being a woman, or concerns about being or becoming overweight. Where she has learned to dislike her own body, or she is not feeling safe and supported, her hormones can be affected. The uterine wall may be experienced by the embryo as being as hard as a concrete wall. The little one may try in different places, becoming increasingly desperate to be welcomed in as hunger increases. Some pre- and perinatal therapists consider this challenge to be the source of many eating disorders (Terry, 2013). If we survive the challenge of implantation, an imprint of not feeling welcomed, or not being able to find home, can haunt us for life.

Our implantation experience can affect our ability to make relational contact and experience secure attachment. For the little one, the felt sense of, "Am I welcome here?" relates to, "Can I be safe here?" and can profoundly affect our ability to reach out, to find home, to settle, to ask for support, to receive welcome when it is offered. Those of us who struggled with implantation may find ourselves moving home frequently. Before the digital age began, my friends used to complain that their address books were filled up with my changes of address. Nowhere ever felt like home for very long. The need to seek a better home was a strong, unconscious

drive, echoing my implantation challenges. A hidden potential has been a deep desire and ability to support others in feeling safe and welcome. Where we have missed the welcoming of the womb at implantation, we have a deep knowing of how important that welcome can be.

Many beings do not survive this developmental milestone. One of the most common early traumas I encounter in clients and students is the experience of having lost a twin in the womb. This loss often occurs in the first few weeks, frequently relating to the twin being unsuccessful in implanting. One outcome may be:

> *The surviving twin may move through life with a mysterious sense of loss, grief, guilt at having survived, or confusion, being unsure if they actually are alive. These feelings can be augmented by the lack of acknowledgement of the loss, which then goes into shadow. The twin may have died before anyone was aware of its existence. Even if its presence was acknowledged, as in hearing two heartbeats or seeing the twin in ultrasound, the experience of losing a baby may be unspeakably painful for the parents. The unspoken is felt by the surviving twin, but cannot be consciously, explicitly identified.*

Those of us who suffer from twin loss may question that there is potential to be found here, but consider the remarkable closeness twins experience and how that might inform our ability to be intimate with others. We already know how to be close. If we can heal our sense of loss and the haunting fear of losing our partners, we may discover we have a seemingly natural ability to be perceptive, empathetic, and authentic in relationship. We can really understand suffering.

Another kind of loss occurring before birth is known as the "haunted womb" syndrome. This occurs when a baby has died in the womb before the current pregnancy. This may be due to miscarriage, abortion, or a twin dying. If the parents have not been able to process their feelings about the loss, the little one in the womb "marinates" in those unresolved, shadowy feelings. As Emerson (2002) states, "We marinate in the shadow (i.e. the denied aspects of the unconscious) of our parents" (p. 68). Too often after miscarriage, women are encouraged to try again, without support to acknowledge and process their intense feelings of loss and grief. Other times, the loss may be unconscious. As mentioned above, when a little one dies early on, the mother may not even be aware of having lost a baby. Her tissues know the loss, however, as does a surviving twin, if there is one. Without acknowledgment, the feelings cannot be processed. This may interfere with prenatal or later bonding and attachment (Gaudet et al., 2010; Markin, 2018). Fortunately, the potential remains when the feelings are processed. Table 1 summarizes common tendencies associated with early trauma as well as the original potential available.

Table 1

Trauma may contribute to life-long tendencies:	**Original Potential**:
– Hyper-vigilance – Increased stress response/sensitivity to stress, overwhelm – Post-traumatic stress – Learning/Behavioral/ Developmental issues – Dissociation/Freeze – Insecure attachment	– Exquisite sensitivity – Social engagement nervous system online at birth – ready for interaction, bonding, secure attachment – Natural resilience – Eager and ready to learn – Resourced for meeting developmental challenges – Bio-intelligence

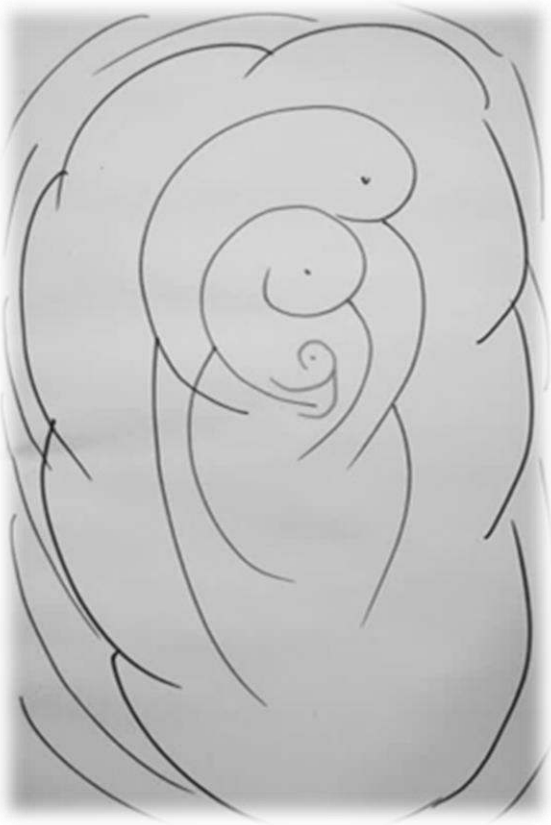
Supporting Wholeness and Potential

When we consider how the expression of our original potential may be dampened by overwhelming conditions we encounter on our journey into life, we can perhaps begin to offer a different kind of portal for those babies yet to arrive. An important step is remembering that a baby is not an isolated "product of birth," but a member of a community, a human field, a planetary field, and even a cosmic field. A baby is intimately connected with their mother. She acts as an outer body before and after birth. When I work with new babies, I always include the mother, treating the pair as one unit.

If we want to return to wholeness, we need to understand what wholeness is. The whole includes the baby, both parents, siblings, grandparents and other ancestors or relatives, pets, the larger community, friends, birthing team, and all of this within a larger cultural and planetary context. Knowing the profound effects of maternal stress, we might consider that probably nothing can be as important for the future of the child, the family, and even the planet as providing adequate support for birthing parents and those planning to become parents. We who care about babies, families, and our world are an aspect of the support needed. All of us, from conception (or before conception) on, are held within fields, within fields, within fields of support.

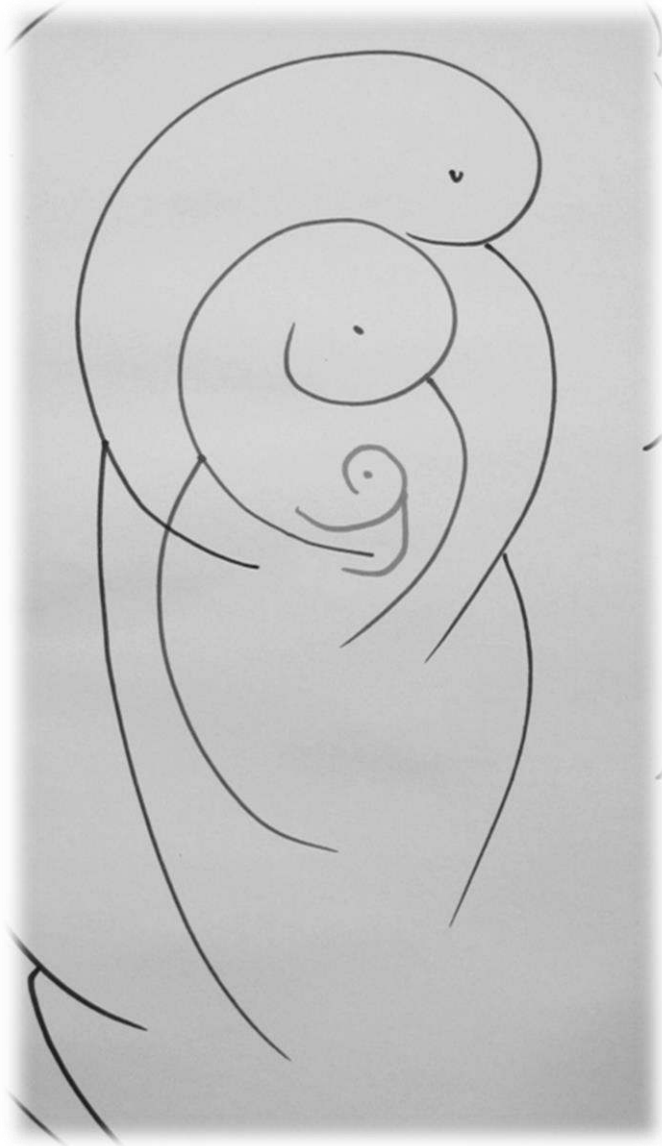
Notice what happens for you when you view this drawing in Picture 1 of fields of support for mother and baby:

Picture 1: Fields of Support for Mother & Baby



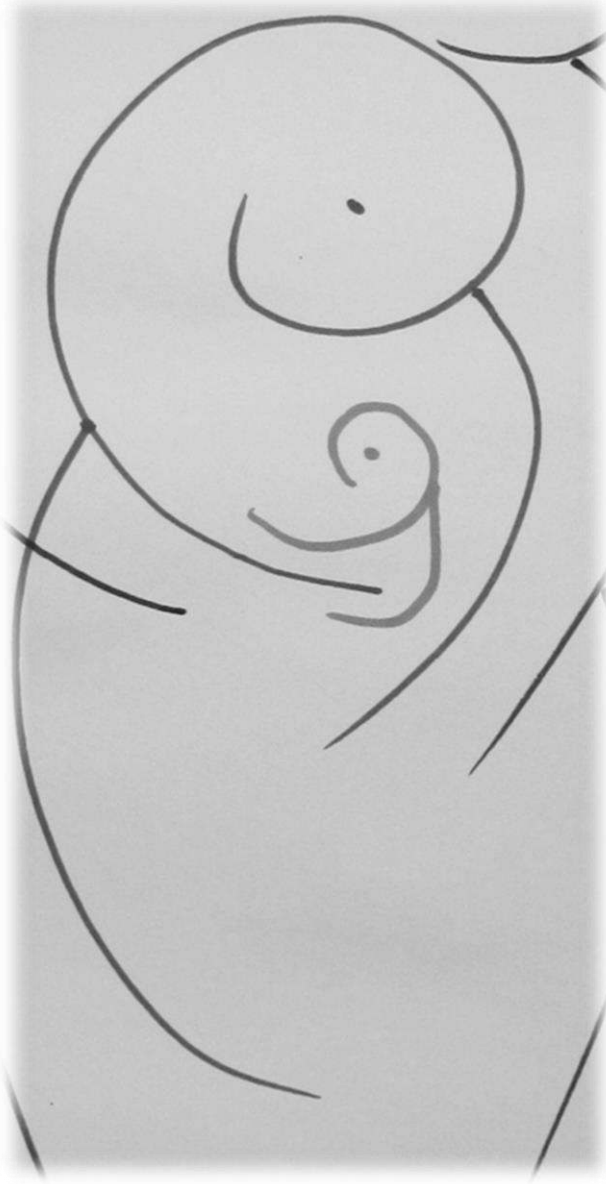
Is your reaction any different when you see Picture 2?

Picture 2: Baby with Mom with Dad's/Partner's Protective Support



How about with Picture 3?

Picture 3: Baby with Mom



Or finally with Picture 4?

Picture 4: Baby in Isolation

Chances are, seeing a baby in isolation doesn't feel right. Babies cannot survive in isolation. Mothers and babies cannot thrive when the fields of support around them are missing or cut off.

We must remember that babies are intelligent, aware, relational beings from the beginning. What then could be more important than making sure new mothers and babies (from before conception on) have the support they need? As Dr. Seuss (1954/1990) wisely wrote via the mouth of Horton, the sensitive elephant who saved the village of Whoville, occupied by tiny people he could hear but not see: "We've got to protect them, because, after all, a person's a person, no matter how small."

References

Brannigan, R., Cannon, M., Tanskanen, A., Huttunen, M.O., Leacy, F.P., & Clarke, M.C. (2019). The association between subjective maternal stress during pregnancy and offspring clinically diagnosed psychiatric disorders. *Acta Psychiatrica Scanidavica, 139*(4), 304—310. https://doi.org/10.1111/acps.12996.

Emerson, W.R. (2002). Somatotropic therapy. *Journal of Heart-Centered Therapies, 5*(2), 65–90. https://www.emersonbirthrx.com/wp-content/uploads/2015/04/Journal-5-2-Somatotropic-Therapy.pdf

Gaudet, C., Séjourné, N., Camborieux, L., Rogers, R., & Chabrol, H. (2010) Pregnancy after perinatal loss: Association of grief, anxiety and attachment. *Journal of Reproductive and Infant Psychology, 28*(3), 240–251. https://doi/10.1080/02646830903487342

Suess, T., Dr. (1954/1990). *Horton hears a who*. Random House.

Glover, V. (2011). Annual research review: Prenatal stress and the origins of psychopathology: An evolutionary perspective. *Journal of Child Psychology and Psychiatry, 52*(4), 356—367. https://doi/10.1111/j.1469-7610.2011.02371.x

Joyce, J. (1967/2014). *Dubliners*. Penguin Classics.

Jung, C.G. (1953/1966). *Collected Works of C.G. Jung, Volume 7: Two Essays in Analytical Psychology*. Translated from the German by R.F.C. Hull. Bollingen Foundation, Inc. & Princeton University Press.

Kinsella, M.T., & Monk, C. (2009). Impact of maternal stress, depression & anxiety on fetal neurobehavioral development. *Clinical Obstetrics & Gynecology, 52*(3), 425—440. https://doi/0.1097/GRF.0b013e3181b52df1.

Lipton, B. (1998). Nature, nurture and the power of love. *Journal of Prenatal and Perinatal Psychology and Health, 13*(1), 3—10.

McGill University. (May, 2020). COVID-19 places added prenatal stress on mother and child that could have lasting impact. *Neuroscience News.* https://neurosciencenews.com/coronavirus-prenatal-stress-16351/

Maret, S.M. (1997). *The prenatal person: Frank Lake's maternal-fetal distress syndrome*. University Press of America.

Markin, R.D. (2018). "Ghosts" in the womb: A mentalizing approach to understanding and treating prenatal attachment disturbances during pregnancies after loss. *Psychotherapy, 55*(3), 275–288. https://doi.org/10.1037/pst0000186

Nathanielsz, P.W. (1999). *Life in the womb: The origin of health and disease*. Promethean.

Puce, J. (1974). *The mystic spiral: Journey of the soul*. Thames & Hudson.

Rodriguez, T. (March 10, 2015). Descendants of Holocaust survivors have altered stress hormones. *Scientific American Mind, 25*(2). https://doi/10.1038/scientificamericanmind0315-10a

Scrutti, S. (2014). "Genetic memory" of grandma's malnourishment affects health of grandchildren, but ends there. *Medical Daily*. https://www.medicaldaily.com/genetic-memory-grandmas-malnourishment-affects-health-grandchildren-ends-there-292438

Terry, K. (2013). Implantation journey: The original human myth, Part 2. *Journal of Prenatal and Perinatal Psychology and Health 28*(1), 61—72.

University of Texas Medical Branch at Galveston. (August 3, 2016). Researchers shed new light on signals that trigger labor and delivery. *Science Daily*. www.sciencedaily.com/releases/2016/08/160803124439.htm

van der Wal, J. & van der Bie, G. (2005). *Highlights of a phenomenological embryology—Principles of a prenatal psychologie*. [Translation by the authors of *Grundzüge einer phänomenologischen Embryologie,* erschienen in Inge Krens/Hans Krens (Hg.), Grundlagen einer vorgeburtlichen Psychologie]. Vandenhoeck & Ruprecht, Göttingen. https://www.embryo.nl/upload/documents/artikelen-embryosofie/Highlights%20Phenomenological%20Embryology%202005%20EN%20chapter.pdf

Yehuda, R., & Lehrer, A. (2018). Intergenerational transmission of trauma effects: Putative role of epigenetic mechanisms. *World Psychiatry, 17*, 243—257.