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Embryo as Person: As in the Womb, So in the World

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General Article

Abstract

Findings in the field of pre- and perinatal psychology reveal that, even as little embryos, we are having experiences, and that these experiences profoundly affect how we live our lives¹. Our earliest days establish lifelong tendencies influencing how we connect with ourselves, each other, and our planet.²

This paper examines the intersection of embryo and psyche, how development of one relates to development of the other. Evidence of cellular intelligence, responsiveness, memory, and learning is offered as a foundation for understanding the profound effects of very early experience.^{3,4} Specific developmental milestones of conception, implantation, and discovery are considered in relation to their psychological effects, underlining the importance of treating the embryo as a sentient, sensitive human being that both models and thrives on love and connection⁵. It is proposed that supporting new parents from the time of pre-conception in providing a welcoming, safe, loving environment for their baby contributes to a world characterized by these qualities, where we can return to our original potential.

Keywords

Prenatal, cellular, intelligence, memory, trauma, healing

Embryo as Person: As in the Womb, So in the World

Images of developing embryos provoke fascination but, for some, they are upsetting. The modern Western world commonly purports the belief that we aren't quite human until we are born, or maybe when we start looking vaguely human as viewed by ultrasound.⁶ I have seen that many

people consider themselves to become parents at birth. If these beliefs were accurate, what could possibly be disturbing about images of innocent embryos?

Findings in the field of pre- and perinatal psychology reveal that, even as little embryos, we are having experiences, and that the nature of these experiences profoundly affects how we live our lives.⁷ Our earliest days establish lifelong tendencies influencing how we connect with ourselves, each other, and our planet. This article examines intersection of embryo and psyche, how development of one relates to development of the other.⁸

Cellular Intelligence

In the beginning, we arrive into a new life as a unicellular organism. Life is ignited by the union of two cells, egg and sperm, which seems to invite in a third element.⁹ We might call it spirit, soul, or essence. Whatever name we apply, many individuals express memories of this important moment of conception. Their bodies also demonstrate apparent memory of the event. I have enjoyed witnessing students and clients who, given the chance, discover their “sperm tail,” as they take joy in wiggling and dancing through a room towards an object they choose to reach, their egg. Similarly, I have witnessed egg-ness being explored through resting in a quiet, receptive state, often accompanied by a sense of expectancy.

How might it be possible for anyone to remember the moment of conception? To address this question, I find it helpful to consider the important intelligence of every cell.^{10, 11} Consider for example your immune system. It could not function without cellular memory. Cells designed to recognize and react to intruders remember them and are prepared should a new invasion occur.¹² As I write this, a global pandemic has been a major news item for too long. Questions and conflicts abound in reference to how to best teach our immune system to protect us.¹³ These ongoing questions are based on supporting intelligent cellular memory functions.

Cellular memory is not the only evidence of cells being sensitive to their environment. Any unicellular organism or cell will react to noxious stimuli by withdrawing from it and will reach out towards nourishment.¹⁴ We do the same as multicellular organisms. Consider how your body responds if you are in a challenging situation. For example, can you imagine having to introduce yourself to a group of strangers, or walking down a street in a crime-ridden neighbourhood. What do you sense in your body? Is there any sense of tension or contraction? If you then imagine a friendly, safe situation, what happens? Perhaps, you are meeting a dear friend with a warm embrace or playing with a puppy or smelling a newborn baby. You may sense some softening and spreading in your tissues. Your cells are intelligently assessing and responding to your situation, remembering, and comparing it to past experiences, and informing the rest of your body.¹⁵

The cells of the embryo are the same. They detect danger or safety in their environment and respond accordingly, informed by past experience. If we return to the scene of conception, egg and sperm are known to communicate with each other, engaging in a “dance of love,” which embryologist Jaap van der Wal¹⁶ names the “Preconception Attraction Complex.” Sensing and responding to chemical and possibly energetic messages, the egg and sperm come together.¹⁶ Throughout embryological development, cells differentiate in response to the context around them, becoming for example heart cells, bone cells, or nerve cells. Your body has been shaped by this early cellular intelligence. We now understand that your psyche has also been affected by it.^{17,18, 19}

Cells also respond to epigenetic influences, guiding them in knowing which genes to turn on or off during development and throughout life. For example, recent research suggests that the mechanism by which prenatal stress leads to higher sensitivity to stress for the child later in life is by cellular memory involving epigenetic changes²⁰. Some scientists now suspect cancer involves cells forgetting which cells to turn on or off, which changes their sense of identity²¹. Cellular awareness, responsiveness, learning, and memory are responsible for our health and well-being.

Early Sentience, Learning and Memory

Having established that cells sense and respond to their environment, we can begin to understand how there might be sentience before birth. Cells are learning and remembering their experience. As they differentiate for different functions, they develop specific kinds of awareness. Health relies on their ability to remember and to communicate. One hypothesis about cancer is that cancer cells, as well as forgetting their identity, may also lose their ability to respond to signals from other cells²², interfering with their relationship with their cellular community.

Cells in isolation have less ability to learn. They display less intelligence. They lose touch with their purpose and function. They forget how to cooperate with other cells. Their self-centeredness can lead to their demise, along with the organism they have forgotten they were part of.^{23,24, 25}

Does this sound familiar? Unfortunately, it reminds me only too much of our human relationship with each other and our planet. I am reminded of the musings of psychohistorian Lloyd deMause²⁶, who sees war as an expression of prenatal anger at the mother. In other words, it is a form of memory of the experience of maltreatment, toxicity, or lack within the womb. This is understandable if again we return to the intelligence of cells.

Like cells reacting to a noxious stimulus, embryos contract and attempt to escape from what they perceive as toxic. For example, extreme or chronic maternal stress is distressing for the embryo. Stress hormones are delivered into the womb along with essential oxygen. The developing nervous system learns that its context is stressful. It prepares for life in the stressful world the mother inhabits. Babies of stressed mothers tend to be more sensitive to stress. This is also true for grandchildren of survivors of extreme stress, like the holocaust^{27, 28, 29}. The field of epigenetics examines how cells can respond and adapt to context when their genetic expression is turned on or off.

Cell biologist Bruce Lipton³⁰ points out that cells can be in either growth or protection mode. They can't do both at the same time. Babies primed for stress are in protection mode. They are more prone to isolation and less ready for connection, love, and bonding. For example, recent research found that babies of mothers living in poverty are born with smaller brains, while those whose mothers live in high crime neighbourhoods have different brain functions at birth, with less neural ability to control and process emotions³¹.

Babies experiencing love and welcome before and after birth can thrive. Their cells perceive safety and nourishment. They can dance in growth mode, fulfilling their natural potential. Mothers receiving adequate support can experience less stress and more safety. Their little one prepares to live in a world of support, where it is safe to grow and connect.^{32,33}

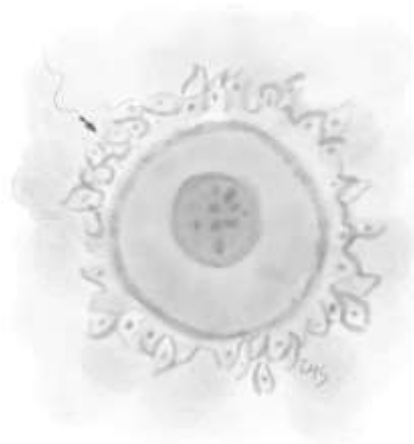
Developmental Milestones: Challenges and Potential

Learning is an ongoing process, even when our bodies look like a collection of cells. As pre- and perinatal psychology pioneer Thomas R. Verny³⁴ points out,

Memory is truly a body-wide web. Whether or not we can consciously access a memory is not as important as the realization that we had the experience, the lived event, which has left some kind of impact, influence, mark, trace, record, or imprint on our cells and tissues.

We remember and learn from our earliest experiences implicitly in our bodies.^{35,36} The embryo, like a child after birth, goes through a series of developmental milestones, each replete with challenges and rewards. We have already mentioned the first, which is conception. A potential for learning here is about connection, as the sperm and egg must connect for survival. As mentioned, this involves communication. There is a natural potential for receptive listening and response. The sperm has a potential for movement that takes him to a goal. The egg potentially receives what she needs and can trust it will arrive.

IMAGE 1 CONCEPTION

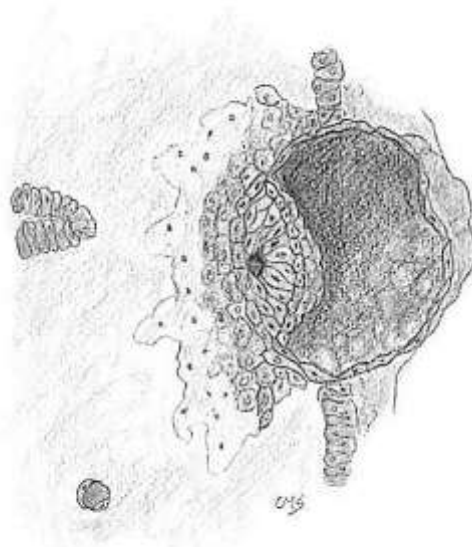


At conception, we might learn about these potentials. Where conception has been challenging, we might also learn about relational conflict, control, and even violence. The relationship and attitudes of the parents at the time of conception affect the unicellular organism coming into being. Consider the difference, for example, between the cellular context that might occur with passionate, tender lovemaking compared to that of rape. The individual carries cellular memories of this context. The new being arriving into a difficult context may suddenly long to return to source, a state pre- and perinatal psychology pioneer William Emerson³⁷ calls “Divine Homesickness.” This may affect one’s ability to fully embody. The person may move through their life as if in a dream, tending to be dissociative and not quite here. Where conception occurs within a field of love, the individual

has a foundation of love from which to grow and meet life's future challenges. There tends to be less shock involved in the experience and it is therefore easier to arrive and embrace being in a physical body.

The next major developmental milestone is implantation. Embryos must settle into the uterine wall by five to seven days after conception to secure an essential source of nourishment. When the mother is well-supported and psychologically ready to be pregnant, her lush uterine wall reflects this readiness and welcomes the little one into it. It is not unusual for the embryo to have trouble finding a place where the wall is soft and inviting when a woman is highly stressed, ambivalent, or not wanting a baby. The learning here relates to ability to feel welcomed, establish a home, experience abundance, and have a healthy relationship to food. Implantation is the first experience of physical contact with the mother. How it is experienced can lay a foundation for bonding.^{38,39}

IMAGE 2 IMPLANTATION



The connection with mother is further elaborated during the next milestone, which Emerson has called Discovery. This is the time when the pregnancy is confirmed by a pregnancy test. It tends to be around the time the heart starts beating early in the fourth week. At this time, maternal ambivalence or outright rejection compared to delight and celebration create very different contexts. The embryo's survival is completely dependent on the mother's welcome and protection. The ensuing sense of safety or threat can influence the child's relational tendencies for life. An imprint of not feeling welcomed may generate a tendency to stay small or invisible to avoid rejection, accompanied by feeling unworthy, and having difficulty recognizing and receiving love, appreciation, or recognition.⁴⁰ The potential learning of this milestone includes the opposite, feeling welcomed, worthy, receptive, and ready for bonding and connection.

The Relational Embryo: Essential Connection

By the time a baby is born, they have already been through a series of milestones that influence how they will meet the challenges of birth. This is true even by eight weeks after conception, when the embryo officially becomes a fetus. As spirit is coalescing into form, the psyche is also developing, influenced by every cellular experience.

The little one is a relational being from the very beginning. At the cellular level, sperm and egg develop a relationship essential for life. Connection is lifegiving at every milestone. Implantation involves connecting physically with the mother via the uterine wall. We connect with our mothers through the flow of blood between us through the tissues developing into a placenta and umbilical cord. As blood flow is more fully established, a rhythmic pulsing becomes the heartbeat, which synchronizes with that of the mother. That heart connection hopefully continues for a lifetime.^{41, 42, 43}

As the umbilical cord develops, it becomes an embryonic tree of life, honored for its lifegiving properties by many cultures through Maypole dances and other ritual celebrations. Via the umbilical cord, we connect with and learn about our mother's world. The nature of that connection can affect our larger relationships throughout our lives.^{44, 45} Where we have experienced umbilical toxicity, we may perceive the world as toxic and threatening. We may have learned to withdraw to protect ourselves and continue to do so after birth. We may then project that toxicity or danger onto people in our lives and even our planet. Mother earth can easily represent the mother we knew as embryo. Our fear and anger, or love and connectedness, seeded in the womb, can be directed to the Great Mother, as well as to anyone we designate as other.

We are living in a world desperate for love and connection. Growing our babies on that desperation tends to generate more of the same. Surely it is time to create something different!

Reclaiming Potential

When we remember the original potential of our embryological blueprint, how can we not long for it? Those living with a sense of threat and isolation may be terrified of love and connection, but I believe they still long for it. Some of us are more aware of that longing and seek it through therapeutic healing. I am repeatedly touched witnessing students and clients demonstrating the courage to move through a healing ring of fire to reclaim their original potential. How do we do this?

The first step in healing is awareness. Acknowledging our pain and wounding can take us a long way.^{46, 47, 48} This may require first recognizing the immense intelligence and sentience of the embryo, starting with each cell responding to its context. I see therapy as being about creating a different context to the one that we experienced the wounding in. Within the context of a safe, receptive relational field, we can begin to rest. We can begin to let go of the tensions and stress we have been clinging to. We can begin to melt the contractions and expand out into our original potential. Within safety, we can dare to connect. Within connection, we can cry tears that were never safe to cry before. We can melt what has frozen in shock and trauma. We can embody anger that empowers us. We can be fully human.

When parents, beginning from pre-conception on, are supported to acknowledge and heal in relation to their own early trauma, and to consciously welcome their new little one with clarity, warmth, sensitivity, and compassionate receptivity, a new generation can be born in love. Babies who

have marinated in safety and love are born with brains ready to perceive and contribute to a world with those qualities. Their emotional and social nervous systems are prepared to engage. ⁴⁹

When beginnings have been other than loving, safe, sensitive, and nourishing, awareness enables repair and healing. Parents often feel guilty when they learn about early sentience, but they need not be helpless. Doing their own healing can support their children. Communicating with babies or even grown-up children and acknowledging parental regret and love can be remarkably transformative for all involved.

Reclaiming our original potential, we can be in love. Our love is inclusive. It includes this beautiful earth we walk upon. It includes the peoples of foreign lands or different religions or beliefs we may not understand. Our potential includes receptive listening. Where we have needed to guard ourselves in the past, we can begin to soften and receive. The embryo can model love and connectedness to us. It is never too late to learn.

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HIGHLIGHTS:

The embryo, a sentient, sensitive human being, both models and thrives on love and connection and is profoundly affected by prenatal influences.