

"War in times of love"- Prenatal cell relations as a prototype of autistic anxieties, defenses and object relations

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In recent years, thanks to new biological studies, one can note with excitement how Tustin's theoretical and clinical work concerning mental primitive anxieties (1980; 1986) captures, with astounding precision, what appears to be the proto-experience of the embryo during the first three months of its life. The embryo, which during this period is no more than a changing and developing mass of cells that lacks continuity, unity or a skin – must cope with two central tasks: withstanding the attack of its mother's immune-system cells, while simultaneously adhering and continuing to proliferate and penetrate into the uterine lining cells.

Following Bion's statement (1976: p.236), "It seems to me that from a very early stage the relation between the germplasm and its environment operates. I don't see why it should not leave some kind of trace, even after the impressive caesura of birth.", we can say that the complex embryonic task imprints itself upon proto-mental life during this early period, in which psyche and soma are one.

As a former immunologist and a practicing psychoanalyst, I will attempt, to formulate a neuro-immuno-psychoanalytic discourse. This discourse aims to expand our understanding of the resonances of those "traces" described by Bion – as made evident in the fears of falling and dissolving, and in the defensive adherence to autistic objects and shapes, so expertly described and studied by Tustin (1980) and Meltzer (1975). To this end, I will draw a

connection between psychoanalytic thinking concerning primitive mental states, and between the central insights obtained by embryological research and recent immunological findings, which tie autism to a dysfunction of the immune system in early pregnancy.

Various authors (Rosenfeld, 1987; Maiello, 2001; Durban, 2011) have described types of environments that the fetus might be subjected to during pregnancy (suffocation by the umbilical cord, arrhythmia, osmotic pressure and more), which might evoke states of unbearable dread, interfere with the evolution of the psyche, and cause the development of autistic defenses. I see this paper as a direct continuation and validation of their work. At the same time, I will attempt to assert that the attack on the embryo is much more molecular and direct, targeting the fetus in its most exposed state, without skin and without protection. Moreover, this genetic-biological-protomental attack serves as part of the normal process of development, so that its resonances are an inevitable part of the primitive mental anxieties experienced by us all. Deviations from this normal process, and defects in it, imprint the embryo's psyche with unconscious proto-phantasies of an uncanny, confusing, aggressive universe. These phantasies necessitate a defensive organization which consists of withdrawal, shutting off, and the erection of rigid barriers, and negatively impact the future relations with both object and reality.

In what follows, I will attend to recent biological-immunological findings through the lens of the analysis of a four-year-old girl. This journey into primal areas of mental development can benefit from applying a "bilingual" perspective – attending to mental materials through a biological prism, while considering the biological materials from a mental perspective, and thus expanding both our clinical and our theoretical understanding.

Autistic states

Tustin's clinical experience led her to assert that autistic states were a "psycho-physical protective reaction rather than a psychodynamic defense mechanism" (1990: p.154), above all due to their being rooted in the body and the senses. She saw it as an immature state of neuro-mental organization, which was not sufficiently protected against awareness of bodily separateness. Stern (1985) similarly asserts that this loss occurs early on, prior to the formation of an experience of going-on-being. Additional clinical evidence, based on the analysis of primary mental states and infant observation, has continued to serve as the basis for descriptions of these anxieties, using concepts and sensations that resonate with early stages in the embryo's life: Bion's "nameless dread" (1962); falling to pieces and dissolving (Bick, 1968); leaking self and falling-into-space (Anzieu, 1989); a lack in a feeling of the body-as-a-safe-mother (Durban, 2019). Or, as precisely put by the poet Alejandra Pizarnik, "my endless fall into my endless fall" (1960). In the language of object relations, as elucidated by Schellekes (2008), these anxieties express an emotional interpersonal layout in which the dominant feelings involve a failure of holding, falling from the mother's womb or the analytic womb, and fear of disintegration of the self because of this fall.

As a defense against these anxieties, the baby is increasingly led to cling, to adhere, and to use "autistic objects" and "autistic shapes" (Tustin, 1980). This concrete sensory and bodily retreat, is created through an unconscious phantasy of active "mantling" by the object (Durban, 2019) and of forcefully annexing its external layers (Rhode, 2012) as a defense against "dismantling" – that is, a passive crumbling of the psyche's connective tissues (Meltzer, 1974, 1992). This annexation of objects, enables the baby to re-experience the "body of the mother" as if it was part of itself, because of its equation of separateness

from the maternal object with death (Meltzer, 1975). Esther Bick (1968) attends to this clinging as equal to the mouth clinging to the breast. In what follows, I describe these proto-experiences using prenatal terminology, and suggest that it is first manifested in the clinging of the embryonic cells to the mother's uterine lining so that it holds them together, nourishing them through diffuse processes. At this stage, such clinging is basic, as fusion is vital, and separateness means death.

Following Freud's words (1910, p.216), "Psycho-analysts never forget that the mental is based on the organic," Gaddini (1980, p.106) writes: "knowing the origin of a particular aspect of mental functioning allows us to observe and better understand the use which subsequently is made of it in the mind." I will therefore attempt to describe what she calls "the mind-body continuum in utero" (p.10) regarding autistic states and the immune system.

The Immune System

The somatic counterpart of the mental process responsible for the awareness of otherness is the body's immune system. Preceding it, in the psychoanalytical discourse as a physical metaphor for psychological functions are the sexual drives (Freud), nourishment and the digestive system (Klein), and the skin as an envelope (Anzieu). The immune system is survival-driven, and is entrusted with the most important mission in the relations with the other: to distinguish between "what is me and is safe," and "what is not me and is dangerous."

Every individual human has a unique combination of proteins (The HLA-Human Leukocytes Antigens) located on all his cell's membranes. When a foreign cell penetrates the cells, or when a familiar cell changes (for instance, as it ages or becomes cancerous), the immune-

system cells identify it and attack the foreign proteins. Some descriptions of the psychic mechanisms mobilized, when the mind encounters otherness, echo the physiological vocabulary of the immune system, such as Durban's (2014) conceptualization of autism as an autoimmune disease, and of the need for "object implantation" (2019).

Indeed, often in meetings with children on the autistic spectrum or with adults who have autistic defenses, I imagine them as existing in the aftermath of an organ transplantation, a time when the immune system is deactivated and external threats are so dangerous that patients are put into a transparent, sterile protective tent.

I propose that far from being a metaphor for psychic processes, the immune system has a crucial impact not only on our survival ability, but on the basic structure of mental development – on the connection forged between the familiar and the strange, new and old, interior and exterior – a movement that has been entirely arrested in the case of some of our patients. In this context, it is not surprising to learn that, in recent years, scientists have focused on the role of the immune system in the onset of autistic spectrum disorders (ASD). One group of researchers (Warren et al., 1996) has recently published an article demonstrating how the traditional immunological view of "one disease – one individual" is changing in the study of ASD, in favor of a new "multifaceted" paradigm, since "the prenatal environment is shared by two half-different individuals, the mother and the child, the maternal-foetal interface appears to be the most vulnerable site for the appearance of neurodevelopmental disorders" (Sotgiu et al., 2020). Once again, it is inspiring to see how these recent advances in immunological research confirm the assumptions that Tustin formulated 40 years ago.

Prenatal life

Looking for the “missing links” between the earliest processes of psycho-physical integration and the autistic child's self-protective postnatal behavior, Suzanne Maiello writes: "The fact that during prenatal life the child's reactions to an event cannot be observed in a continuous way represents a difficulty if we want to think about fetal experiences" (2001, p.108).

Today, it is possible to minimize these “difficulties” due to technological advances that allow for the observation of what is occurring behind and within the “uterine wall,” and thus to deepen our understanding of what Bion (1962a) termed “happenings” – the events experienced by the embryo in utero from the moment of its conception, serving as a background for later object relations.

These "happenings" are best understood via two promising fields of research, which show that, contrary to widespread belief, the implantation of an embryo at the initiation of a pregnancy is a war-like situation, in which "the embryo uses a variety of coercive tactics to force its acceptance."

The first, investigates what has been named "War in Times of Love" (Ashary, 2018)– the process of embryo implantation in which the fetal cells gather together, adhere, root and are “enveloped” by the cells of the uterine lining, in order to ensure nourishment and protection (Chavatte-Palmer and Guillomot 2007) (fig. 1). I would like to suggest that this "adhering to the surface" in an intrusive way is the first biological defense mechanism against falling and dissolving. Beyond the use of identical terms (Tustin, 1986; Meltzer, 1975), molecular studies have found correlations between autism and abnormal levels of proteins, such as human chorionic gonadotropin (hCG) that is critical in the process of implantation. (Windham, 2016)

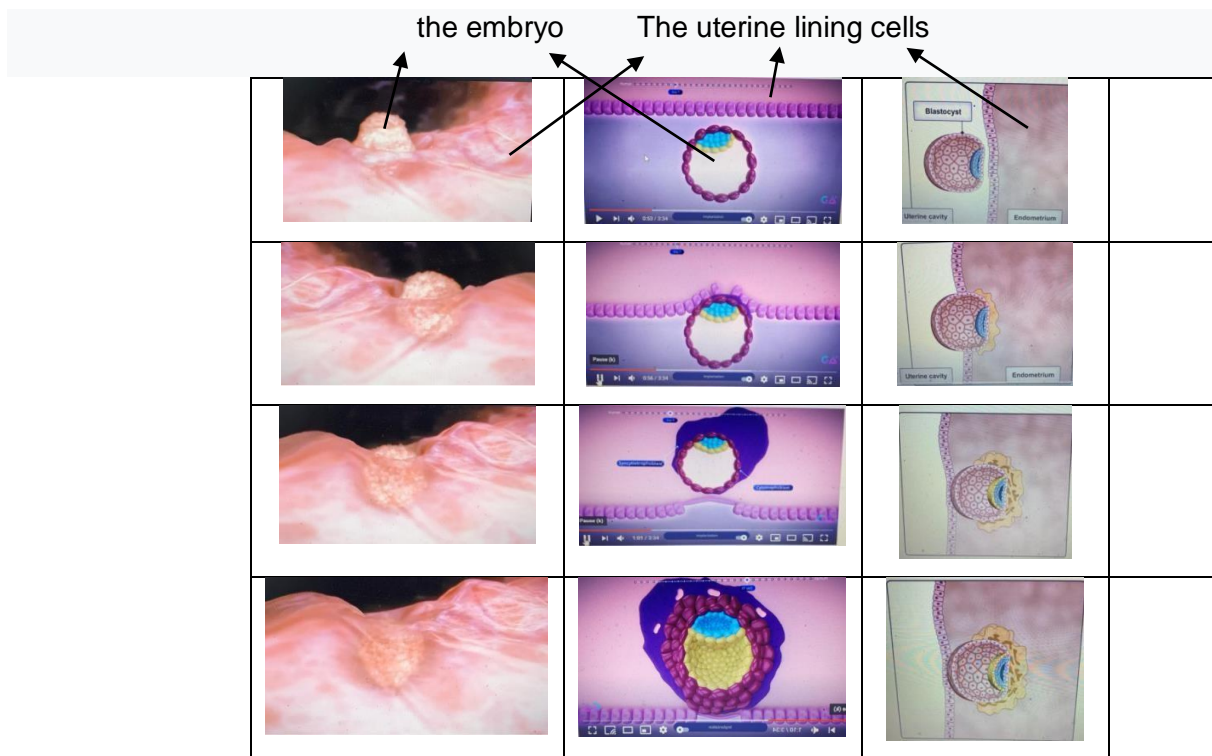


Fig. 1-The embryo's cells adhere and penetrate into the mother's uterine lining (Medical Animations, 2014)

A second field of research focuses on the interaction between the fetal cells and the maternal immune cells, which also proves to be much more turbulent than we had previously thought. This interaction can escalate, due to the mother's defensive reaction, to the point of an attack on the embryo, causing a miscarriage (Mor and Cardenas, 2010). A study conducted in 1988 by Bulmer et al. revealed that, contrary to earlier views of prenatal harmony, in the first trimester, 40% of the cells in the tissues connecting the embryo to the mother are immune-system cells. Moreover, it was later surprisingly revealed that most of these cells were NK (Natural Killer) cells (King, 1997), which are known to have the greatest lethal potential among the immune-system cells.

These unexpected and intriguing results have led many scientists researching immunological embryology to focus on revealing the normal embryonic mechanisms for

coping with these attacks. In an illuminating series of carefully designed studies, that could also prove meaningful for psychoanalytically-oriented readers, these scientists have discovered that, in normal pregnancies, the fetus expresses a unique protein, HLA-G, which inhibits the NK cells and can cause a radical change in their functioning: rather than attacking the embryo, they become vital in assisting it by releasing Growth-Promoting Factors, which have two critical roles (Mandelboim, 2006; Ferreira et. al 2017):

1. They transform the uterine-lining cells into a more supportive environment for the embryonic cells.
2. They enhance the neurodevelopment of the embryo.

Other scientific studies have indicated that increase in immune-attacking milieu during pregnancy has been observed in association with the development of ASD, similarly to what occurs in women with recurrent miscarriages (Guerini 2018). No wonder, then, that fetuses having such aggressive proto-experiences and are born with "nameless dread" (Bion, 1962).

I would like to propose that, in biological terms, the embryo's ability to successfully root itself in the uterus and to develop normally, depends on the transformation of the lethal NK cells into life-giving cells. In psychodynamic terms, this is a transformation of the destructive drive of the death instinct into the life-giving drive of the libido, which depends on the constitutional balance between these two forces as expressed in the quantity of HLA-G. In this context, these forces are not only a metaphor, but rather a biological reality.

Among the numerous studies currently attempting to find more correlations between autism and immuno-embryology, two recent research areas are especially pertinent to the current discussion. The first area of research demonstrates how the pregnancies of those later

diagnosed with autism were characterized by abnormal levels of cytokines and diversion in the normal activity of the NK cells (Patterson 2007), and were associated with mother's depression (Herbert and Cohen, 1993) and alcoholism (Fulton, 2006). In terms of genetic-constitutive factors, Mancota et al. (2016) examined the DNA of the NK cells of children diagnosed with ASD and their parents, hypothesizing that certain combinations will cause or predict a heightened risk of ASD. Fig. 2 reveals that the combination they studied indeed increases the lethality of the NKs, causing what is termed MIA (Maternal Immune Activation), and stalling the release of proteins which foster normal development.

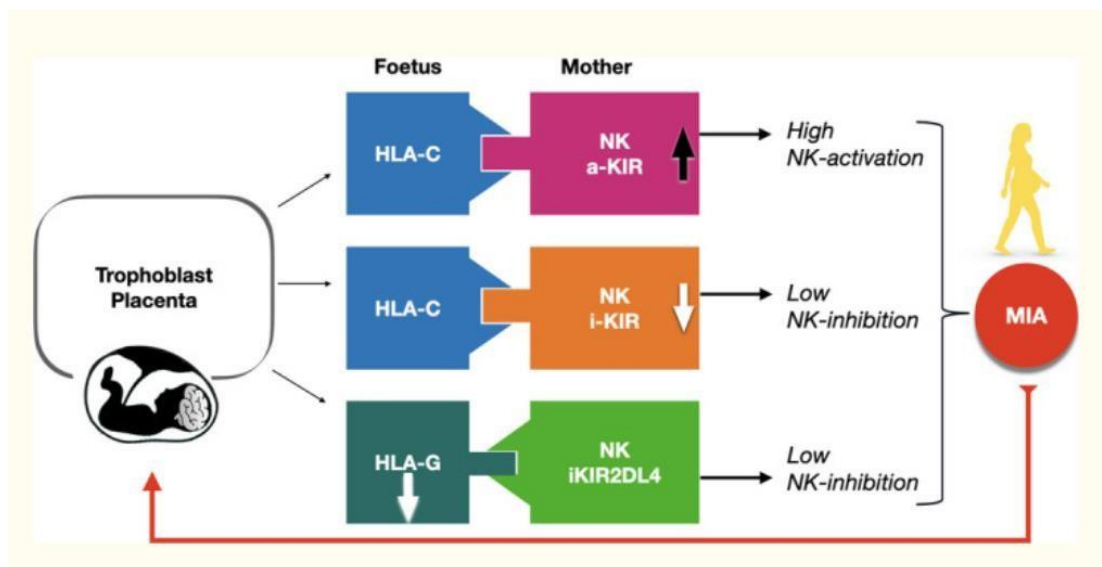


Fig. 2 – MIA and autism

I would like to suggest that when this process occurs normally, it results in an increased physical and psychic ability of the newborn to cope with objects that are not identical to him. From a physiological perspective, it allows for the maturation of the embryo's prenatal neuro-immunological system, preparing it to cope with external pathogens as a basis for its future immune system. From a psychic perspective, the embryo's ability to overcome the attack, and to transform it into a form of containment, reduces the power of the proto-

experiences of persecution evoked by the object (the mother's immune cells), increases the proto-experience of the object's flexibility (the mother's uterine lining cells), and causes the release of elements that influence the embryo's normal neurodevelopment.

In the analysis of Yael, which I will now turn to describe, I thought, from the moment she met me and the analytic room/womb, that she was reconstructing her primal encounter with the uterus – an encounter that was lacking, incomplete and traumatic.

Yael

Yael, aged four at the beginning of the analysis, was born in Brazil to a mother who was an alcoholic and addicted to drugs. She was taken to an orphanage immediately following her birth, and was kept there for a year and two months, until she was adopted. From the time of her adoption to the beginning of the analysis, she underwent three difficult years that included moments of arrested breathing and hospitalizations, episodes of regression and detachment, screaming and temper tantrums. Additionally, she, reportedly, acted "strangely," consistently repeating meaningless words. Her parents were helpless, despairing and depressed, and often thought with regret about their decision to adopt her.

The first months of the analysis were characterized by a recurrent pattern, which was established during our first meeting: At the beginning of the session, Yael attempted to cut out, various shapes of cardboard and to glue them to each other. Her failure to successfully perform this task led her to tear the cardboard, throw all the books from the library and attempt to flee the room. Facing the closed door, she shouted and threw herself repeatedly against it, in a manner that appeared to me to be very painful. Any type of interpretive connection I attempted to offer as a container for her frustration and anxiety only led to further escalation. All I remembered, retrospectively, was the experience that anything I

tried to say rendered these outbursts more extreme, and the thought that I would do better to remain silent. But even when I kept silent and refrained from looking at her, and even when she shut her eyes and ears in her heart-wrenching attempts to seal off all her openings, she still appeared to be under an intolerable attack. The screams were so intense that neighbors in the building knocked on the door to make sure I wasn't abusing her. Subsequently, when the screams did not stop, they even warned me that if this went on, they would have to ask me to move my clinic out of the building. The chaos that Yael left behind her in the room was so great, that I had to cancel the following meeting in order to put things back in order. Yael's mother, who heard the screams while waiting outside, hesitated about pursuing the analysis, yet seemed to experience some relief when she realized she wasn't the only one who was being screamed at.

During those first weeks, I felt myself to be an analyst carrying a "high-risk pregnancy," with attacks occurring both within and without. When Yael went out of control, I was horrified by the idea of being forced to leave the clinic, while simultaneously feeling that I was just making things worse – that my eyes and my breathing were causing her such a catastrophic anxiety. At the end of each of these meetings, I couldn't remember anything, except for the image of being in the presence of a burn victim stripped of his skin, for whom the slightest breeze was experienced as an intolerable form of torture.

About two months into the analysis, while she was screaming, Yael suddenly stopped breathing and fell on the couch. Though her parents had described frequent bouts of apnea, starting a day after she arrived in Israel, and leading to panicky trips to the emergency room, for one dreadful moment I feared that she was dead. I checked on her while continuing to talk, saying that I understood how much she feared my penetration, and that this was her

final, desperate attempt to seal herself off so I would not be able to get into her. Yael curled up in a fetal position, quietly withdrawing into herself. I thought how great the danger was, and quietly said that I could sense how unprotected and skinless she felt in the room.

Several meetings later, during another screaming fit, I felt an urge to disappear. I walked behind a wall that partially divides my consulting room, and remained silent. After a while I noticed that the room had grown quiet. I said: "Now there is a wall between us. I am on this side of the wall, and Yael is on the other side. The wall is thick and strong, ensuring that nothing bad from me can reach you". Yael responded by saying that now I should stop breathing as well. And so I did, for as long as I could, feeling that every breath of mine released a stream of toxic elements that could attack her.

At the beginning of the following meeting, Yael came and uttered her first sentence in the course of the analysis: "You are Miriam, and you have to build an ark for the baby Moses, so that he won't drown." She requested the ark to be made of paper, which, predictably, became soggy and partly dissolved when we put it in water. Yael began screaming in despair. I said she was afraid that she had once again met a mother who was not good, who couldn't make a safe place for her. I added that it was very dangerous to be unprotected, now that she was so close to me. While walking behind the wall, I said I would protect her from all of my "bad stuff" until she felt safe, and meanwhile I would stay behind the wall. An unusual silence descended on Yael's side of the room. When I peered over several minutes later, I saw her lying on the carpet in a dream-like state, her hands playing with cotton-wool balls. When the session was over, I found her wet with urine, which did not appear to bother her. As the urine reappeared in the following sessions, I interpreted her calming down and loosening up to be the result of her no longer feeling attacked by my

presence. (Only later, I could imagine her as an embryo urinating, as it does in the course of normal development, in order to surround itself with an envelope of amniotic fluid).

We continued with the analysis, in the course of which I spent a large part of each hour standing behind the wall, while Yael lay on the carpet and played with the balls of wool. I noticed that her resistant screaming in the street, prior to her arrival, had stopped, and realized how much she needed to feel my presence without seeing me. Several weeks later, she began “sneaking” quickly over to “my side” to grab things for “her side” – first a carpet and later a box of staplers and transparent tape. Yael began sticking bits of tape on her body, and after a month or so, she asked for my help. At first, I failed and was chased away by her screaming back behind the wall. But gradually, about six months into the analysis, she enabled me to help. The bits became one long strip of tape that enveloped her, so that she appeared to be ensconced in a transparent envelope. I told her that she had found a trick for not falling apart, that she could relax now that everything was connected, and that I understood that all of the screaming earlier was because there was nothing to hold her together, and everything was falling apart. Yael answered: “Now you are a she-wolf. Howl really loud, and frighten me.” I said: “I am now Mother Wolf, and I am going to really frighten you, but because you are wrapped in tape, there is a chance that you will survive.” After I had howled quite loudly, she said: “Now you are the she-wolf from the Jungle Book. I want to eat.” And so we continued. At moments I was the she-wolf who attacks and frightens, and in other instances the nourishing she-wolf. I felt how the process of differentiation in the room continued to evolve, transforming the space from an unbearable, murderous uterine environment into an object awarded recognition. Only then was it possible to start a normal-like pregnancy with a split mother-object who represented both

good and bad parts in an alternating and confusing manner, a mother who could threaten yet could also help and nourish.

Later, when I finished “feeding her”, Yael announced that now she would “take my heart.” I said that now, that she wasn't so scared of me, she wanted to take everything from me to have as her own. As she didn't respond, I thought otherwise – prenatally – and suggested she wanted my heart next to her so she could sense it beating near hers, feeling what it was like when two hearts beat one next to the other, like when a baby is in its mother's belly, at the beginning of life. Yael took my scarf off my neck, put one end in her mouth and inserted the other end into her underpants. I commented that she was continuing to connect me to her, from the top down. When she drew closer and cuddled up beside me, I realized that I was in tears.

About 12 months later, and after going through some 200 rolls of tape, Yael gradually changed the quality and characteristics of the enveloping material, moving to use a blanket that she wrapped around herself as a means of protection. The shift from a transparent, hard envelope to a soft, opaque envelope recalled a transition from the enveloping placenta to a skin envelope. During this period, the catastrophic moment was transported to the end of each meeting, which began when I merely glanced at the clock – triggering the familiar episode of fury. At that time, she would leave only after adhering to something made or done in the course of our time together.

A few words about the technique

During many moments, especially at the beginning of the analysis, I pondered the appropriate technique for treating such primal disintegration. I could sense how not only my words, but

also my breathing, were experienced as a swarm of beta elements attacking from both the inside and the outside (Bion, 1962). I also saw, with much pain, how Yael was struggling to survive by means of autistic and psychotic defenses: she screamed and rushed about – attempting to create a vocal and kinesthetic envelope that could gather her up within it (Maiello 2001). She also attempted to stop breathing, sealing off all of her orifices to prevent me from entering and to ensure that she would not leak out and disappear, and would throw herself on the door to undo the boundary between inside and outside. I understood that I was required to find additional, non-verbal ways of being present. From an immune-embryological perspective, she needed to transform the room to a nourishing uterus that was not attacking her, so that her projection on my particles as persecuting her could gradually decrease. To this end,

1. I created a stable, consistent setting of five sessions a week at a regular hour – a concrete action- needed to rebuild a functional container that would hold her, while also remaining flexible and changing, allowing her to take objects from the room (Quinodoz, 1992).
2. I cultivated an accepting and total presence – offering the room, my body, and my internal objects so that they could be invaded and even destroyed. I thus enabled her to destroy my books, scrawl on my walls, bite me, dribble, and leave behind a destroyed, chaotic room – only to re-encounter it in a clean, orderly state upon her return. My internal objects had similarly been attacked and injured by evoking unbearable memories of my own personal traumas. I understood to what extent Yael's unrepresented traumas were destructive and painful, in need of a mother-analyst

womb to be contained in as Klein's notion that our consulting rooms are equated, in the unconscious, with the maternal body (1961)

3. An extensive use of a live, active presence and reparation in action (Alvarez, 1992, Pollak, 2009) aimed to distinguish and connect bodily functions, inside and outside, self and object, and different emotional states. So, by standing behind the wall to concretely separate myself from her, darkening the room, remaining silent, averting my gaze, and attempting not to breathe, I was trying to prevent the exterior world from intruding while she was still unready. Later, I helped her to envelop herself in tape so that she would feel less disintegrated.

Discussion

The mental “impressions” (Bion, 1962a) of prenatal life have preoccupied psychoanalysis from the very beginning. As Freud stated (1926), “There is much more continuity between intra-uterine life and earliest infancy that the impressive caesura of the fact of birth would have us believe.” (p.138) The interest in these impressions continued to grow as analysts began attending to unrepresented mental states (Levine, 2013). Until recently, however, it was difficult to view and study the source and essence of these “happenings,” which seemed to originate in events that occurred behind the “womb's wall”. The inspirational and intuitive work undertaken by Tustin (1980, 1986, 1990) and by her successors (Bick, 1968, 1986; Meltzer, 1975; Maiello, 2001; Mitrani, 1996; Durban, 2011, 2019), who hypothesized the existence of such states, and conceptualized them with astounding precision, is now receiving scientific validation from advanced 3-D technologies, gene expression-analysis and genetically engineered animal models. As in the field of infant observation, these discoveries can, in turn,

deepen and contribute to a more accurate recognition and understanding of prenatal situations in clinical practice, as well as to different modes of being and to the transference counter-transference matrix they entail.

In this paper, I have sought to expand our knowledge of these primal impressions, suggesting that they originate in the first weeks of the embryo's formation. Additionally, I have attempted to forge a connection between this new biological knowledge and classical psychoanalytic theory, which describes the struggle between the life and death drives as the basis of mental development. I have suggested an analogous conceptualization of the early stage of pregnancy, in which every embryo oscillates between a state of non-being and a state of being on the verge of object relations, or more precisely object-cell relations. It is at this point that the embryo's fate will be determined, by the combination between its mother's uterine and immunological cells and by its constitutional balance. That is between life and death forces (which will later be discussed as life and death drives) as expressed concretely, rather than symbolically, by the innate balance between inhibition of the NK cells (life) and activation of them (death). I would now like to outline three trajectories that become possible at this point: in the **first** case, the death force is dominant: the embryo does not survive, is aborted, or dissolves into the uterus. In the **second** case, when the life force is dominant, the embryo's cells express a protein that can transform the mother's NK cells into ones that support its development and implantation in the uterus. Since, as in many other biological and psychoanalytic processes, this process is not binary, the lethal potential of the cells does not disappear, but is merely weakened. Thus, the unconscious phantasies of each of us are composed of unique doses of a containing versus an attacking reality, an imprint of coping and resilience in parallel to existential and paranoid anxieties. In the course of normal

development, these themes are evident in children's play, in adult dreams, in art and in regressive states in the course of analysis (Schellekes 2008). as described by Mitrani (1996 p.63): "It has been my experience that when these states do manage to come to the fore-in analysis, the feelings and phantasies evoked in the analyst (if we remain receptive) are unusually disturbing and unmistakably primitive in nature".

In the **third** case, on which this article centers, the infant is born in a state of limbo, suspended between the life and death forces. I suggest that in this unique state, the embryo manages to implant itself in the uterine cells, developing in a manner that appears normal – yet lacks the impact of sufficiently having transformed the mother's killer cells. This entanglement of nourishment and acute attack dramatically impacts the embryo's development: the low level of cytokines negatively influences its neurodevelopment, while on a mental level, the embryo is flooded by unconscious proto-phantasies of an alien and confusing object, at once, nourishing and annihilating – an object which it is impossible to digest and internalize, awakening both intense longing and destructive aggression (Durban, 2018). I experienced myself as such an object at the beginning of the analysis, when I witnessed Yael's arrested breathing, screaming, and destructive urge, combined with her desire to embed and implant herself in my body and mind, and her longing for me to connect her different parts, connect her to me, and nourish her.

These extreme and confusing proto-impressions at such a primal stage have a destructive impact on the embryo's pre-modality of being, and experience of itself as existing and alive. The future child is born with a severe impairment in its feeling of going-on-being, and the developing self is experienced as perforated by "black holes" (Tustin, 1986) on both a sensory level and on the level of representation. In this state, the future infant requires an

especially adapting environment – with a minimal level of external disturbance and a stable, inviting and active presence, in order to mend these holes – that is, to repair and heal the confusing and chaotic impressions engraved within him. At the beginning of Yael’s analysis, I could sense in my body the extent to which she begged for such an environment, which she needed as much as pure oxygen – while every breath or gaze of mine attacked her in an unbearable manner. Later on in the analysis, when she could express herself in words, she said while “searching” the room for a fitting mother: “a snake-girl like me needs a snake-mother like you to raise her inside,” thus expressing her longing for a state of optimal compatibility between our cells, so that she could grow inside a mother who knew about poisoning, suffocating, murderousness and death, as well as about the shedding of an envelope, shape-changing, and above all – healing.

As her analysis unfolded, it became clear to me that Yael was this third type of patient. She, I and the room were imbued with impressions, of fragmented catastrophic experiences that were embedded in her as “bodily memories” (Mitrani, 1996), entering the analysis as a fragmented cellular-like transference, made of aggressive and intolerable particles. Such fragments “leak” in, as a “transference into the analyst,” in Housel’s terms (2018) rather than the “transference to the analyst” with which we are familiar. Thus, as this disintegrated and terrifying experience infiltrated me, I – like Yael – experienced the analysis as suspended between life and death. I could feel the horror and disintegration, and the danger posed to both her and me of an abortion from the analytic womb – a uterus attacking a disintegrated and defenseless creature attempting to cling to whatever came its way. At the same time, I was also infiltrated with the proto-impression of her internalized mother – a mother incapable of subduing and controlling her own internal destructiveness – or, put in immunological terminology, her NK cells – and thus unable to provide a good

enough uterine environment. In retrospect, I realized that my act of standing behind the wall and trying not to breathe were attempts, much like those made in biological research, to hinder the aggressive attack of the NK cells.

It seems that these intolerable object particles shaped and resonated with Yael's pattern of object relations with great force, because she had encountered a series of experiences that rendered the trauma more extreme. The beginning of treatment thus echoed the trauma of adoption, which in turn echoed the trauma of birth, which echoed the trauma of struggling to take root in the womb of an alcoholic, drug-addicted mother who did not want her.

Thus, only after Yael and I succeeded at hindering and transforming what she experienced as an aggressive swarm of substances, directed at her within a murderous womb, could she reconstruct a normal course of embryonic development, acting and activating me much as Klein (1957) describes: "the baby acts on the mother in a way that helps her feed him." Transforming my attack into containment, she actively sought my adhesive and nourishing substances, enabling me to assist her in creating for herself a protective, adhesive layer. This layer of tape separated her from me and held her parts together so that they would not disintegrate, much like the biological process of the embryo's consolidation within the uterine cells that hold and envelop it in the earliest stage of pregnancy. This process resonates with Bick's (1968, p.1) psycho-somatic description: "the parts of the personality are felt to have no binding force amongst themselves and must therefore be held together in a way that is experienced by them passively by the introjection of an external object, experienced as capable of fulfilling this function. Later, identification with this function of the object supersedes the unintegrated state and gives rise to the fantasy of internal and external spaces. Only then the stage is set for the

operation of primal splitting and idealization of self and object as described by Melanie Klein." Thus, only after feeling that her parts were held together and connected through the "internalization" of my elements, which became benevolent, could Yael continue the process of rooting herself in the room and connecting to me as an object. She used my scarf as an "umbilical cord" connecting together two objects, split and projected onto me the good she-wolf and the bad she-wolf, and expressed her longing for a pulsating, soft, and close maternal object, which had thus far, been experienced as so dangerous and impossible.

As time went by, the clinging and use of concrete objects such as the wall, tape and scarf were transformed into internal "walls" and "envelopes" that allowed for healthy movement towards defenses of splitting, and setting boundaries, on the path to integration. Thus, in the second year I saw the themes that had infiltrated me earlier taking on a more projective and separate character, as Yael cast the two of us in different roles in scenes that we played out. She could be the child whose mother poisoned, abused and abandoned her suddenly and arbitrarily, while she begged for acknowledgment and received (from me) sadistic treatment, scorn and indifference. Or she could also don a rigid armor: "You stupid mother, you're so dumb and I'll get along without you". To which I answered: "Really? You are so weak and small, and will succeed at nothing in life." At other times, I was "cast" in the role of the demanding infant, screaming: "You have to feed me, now! Or I'll tear this whole room apart". To which she answered: "You're always such a hungry, annoying baby, stop making so much trouble or I'll make you fall out of here and you will have no life", inviting me to feel the impression of her in-utero proto-experience. Our meetings unfolded in this spirit, with a play characterized by a tempestuous quality and the object parts rapidly replacing one another in the course of the session – both between me and Yael and within each of us.

The idea that the earliest object relations develop between cells, and that autistic states originate in a defect in the first intercellular formation, presents us with a complex psychoanalytic challenge. This challenge touches upon primal materials that are powerfully present yet unrepresented, containing not even a partial object. They are thus transferred to us through a diffuse transference composed of fragmented parts and intensified nameless feelings. I have attempted to show that the analyst's mode of presence and interpretation must touch upon this most primal, traumatic and molecular experience— so that the prenatal transformation arrested in the past may now occur. Scientific developments that enable us to observe the body in general – and the immune system in particular – on a cellular level expand our gaze to include this primal encounter with the other, and can assist clinicians in their efforts to reach and to maintain contact with those elements of the patient that are most in need of help, providing us with a more precise language and images. In doing so, we can meet with Freud's aspiration to see psychoanalysis integrated with natural sciences, and follow in Tustin's footsteps as we further attempt to define and expand our understandings, mode of presence, and technique when treating primitive mental states.

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