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Being touched through touch. Trauma treatment through haptic perception at the Clay Field: A sensorimotor art therapy

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Abstract
Neuroscientific research provides increasing evidence of the intimate relationship between physiological and psychological dimensions of human experience. The integration of body awareness into psychotherapy through a focus on sensorimotor processes is increasingly becoming best practice in trauma therapy. So far the arts therapies have given little attention to the role of touch in this context. Touch is one of the fundamental human experiences: to know loving or unwanted touch, the traumatic rupture of boundaries and their repair. Touch is the basis for secure attachment, linked to earliest body memories, to the ability to handle the world, to sexuality and injury. The use of the hands as a tool of perception is known as haptic perception. Clay is a familiar art therapy material which features tactile expression and experiences. When hands touch clay in a therapeutic setting, exteroceptors and interoceptors become naturally stimulated, and every movement of the hands provides instant feedback to the brain. Haptic perception allows non-verbal access to psychological and sensorimotor processes thwarted by trauma. This article reviews Trauma Healing at the Clay Field® as a sensorimotor art therapy approach in trauma recovery.

Keywords: *Trauma, sensorimotor art therapy, haptic perception, touch, clay, hands, top-down versus bottom-up approach in therapy*

Introduction

Common to most modalities in the art therapies is the engagement of hands in creative expression. Art therapists encourage and support clients to experiment with and experience the paints, the pastels, the colour, the plasticine, the clay, the movement and the sensate qualities held within the materials and the experience. This forms the ways of knowing through which the unknown can become known, the unspeakable shared, and life experiences storied. These are the gifts for communication and expression.

Yet there is a paucity of literature that focuses on what it is that the sense of touch—haptic perception—contributes to art therapy processes. Perhaps this lack of specific art therapy literature on haptic perception can be attributed to the research being founded within cybernetics (Grunwald, 2008; Patterson, 2007) that has focused on technological applications of human haptic. Historically art therapy has predominately focused perception on the visual experience and the creation of images and objects rather than the tactile experience. 'Art as therapy' activities have the potential to activate neural pathways related to tactile and kinaesthetic associations. Sensory experiences include, touch, movement, visual and sound' (Hass-Cohen & Carr, 2008, p. 35).

Emerging neurological research shows that the hand has been instrumental in shaping the human brain (Wilson, 1998). The anthropological and evolutionary perspective of the development of our hands reads like a neurological thriller, yet it has neither been explored in its benefits for art therapy nor in its immense potential for treating developmental trauma through touch.

The purpose of this article is to introduce and outline Trauma Healing at the Clay Field®[1] (Elbrecht, 2012) as a psycho-physiological art therapy process that engages the hands with the material of clay within the safe setting of a containing box. In the treatment of trauma there is now evidence to support the need to engage somatic and body experience in therapy (Van der Kolk in Solomon & Siegel, 2003). This integration of body awareness into psychotherapy through a focus on the sensorimotor processes is known as the bottom-up approach in trauma therapy. Work at the Clay Field® is an intricate interaction between human neurobiology and expressions of lived experiences. The clay field is a rectangular box filled with non- gritty clay. The client is accompanied by the therapist who encourages and supports hand movements in the clay, accessing haptic perception. German art therapist Professor Heinz Deuser has developed this approach over the past 40 years (Deuser, 2004, 2006, 2007, 2009). Since 1970 in Germany, Work at the Clay Field has evolved and been applied in clinical settings from private psychotherapy practices, educational and community welfare centres to psychiatric services. Both adults and children are suitable candidates for clay field

therapy. There is anecdotal clinical evidence for the benefits in single incident trauma, developmental trauma and complex trauma syndromes. In addition, a first PhD study has confirmed many of Professor Deuser's findings (Hölz, 2013). Further research is currently planned. Haptic perception, the language of the hands and Work at the Clay Field will be discussed in detail further into this review.

Trauma. What is it?

Human beings have an innate quest for healing and wholeness. 'Analysing problems and focussing primarily on what has gone wrong in a person's life does not necessarily support self-regulation, and in some cases, increases dysregulation' (Heller & LaPierre, 2012, p. 7). 'Human beings respond to shock and developmental/relational trauma by dissociating and disconnecting. The result is a dimming down of the life force that leaves a person, to varying degree, exiled from life … [W]orking with the roadblocks that are in the way of reconnecting with aliveness is a key organizing principle' (Heller & LaPierre, 2012, p. 9).

There is a significant body of knowledge now available about trauma, the impact of trauma as well as the treatment of trauma. A landmark study on Adverse Childhood Experience (ACE) substantiates the link between childhood abuse and adult mental and physical wellbeing (Felitti, 2002). The majority of people who seek assistance from mental health services are survivors of multiple kinds of adverse and overwhelming life experiences and interpersonal violence leading to psychological trauma (Van der Kolk in Solomon & Siegal, 2003).

Historically, from the nineteenth century through to contemporary times, there have been attempts to recognise and classify the experience of trauma. Only over the past few decades has a distinction been made between the impact of single incident post-traumatic stress and the impact of childhood adverse experiences resulting in complex trauma (Herman, 1997). Complex trauma has as its unique trademark a compromise of the individual's self-development and is cumulative, repetitive and interpersonally generated. It includes ongoing abuse, which occurs in the context of the family and intimate relationships (Adult Survivors of Child Abuse [ASCA] Guidelines, 2012, p. 169). Some associated classifications for complex trauma are Complex Post-Traumatic Stress Disorder, Disorders of Extreme Stress Not Otherwise Specified (DESNOS) (Cloitre et al., 2012) and Developmental Trauma Disorder (VanderKolk, 2005). It is these categories of trauma that are referred to as the experience of trauma or trauma throughout this article.

Trauma and a bottom-up approach to therapy

Chronic traumas, such as those described as adverse childhood experiences, interfere with neurobiological development and the capacity to integrate sensory, emotional and cognitive information into a cohesive whole. Therefore, whatever therapeutic modality is employed, the approach must be able to address the three dimensions of the cognitive, the emotional and the sensory aspects impacted on, in working towards recovery. The cognitive dimension refers to the capacity to conceptualise, problem solve and reason and the capacity to make decisions as well as making meaning of experiences. Emotions are colouring agents that texturise our experiences. Emotions have two foci. One is motivations as drives and the other is the internal experience of the felt sense. Sensory refers to the internal physical sensations of the body, whether derived from emotional or cognitive experience or from tactile or kinaesthetic experiences (Ogden, Minton, & Pain, 2006).

The therapeutic focus on the cognitive with the intention to manage psychological states and body sensations through reflection, thinking and problem solving is called the top-down approach (Rothschild, 2000, 2003). An approach to therapy that allows the kinaesthetic motor impulses to emerge, then gradually introduces sensory body awareness through the felt sense and which then may lead to cognitive insights is called the bottom-up approach to psychotherapy (Van der Kolk in Ogden et al., 2006).

Trauma is a psychophysical event that has happened to an individual whose involuntary autonomic nervous system becomes overwhelmed (Elbrecht, 2012; Levine, 1997, 2010; Rothschild, 2000). To understand the impact of trauma, it is critical to understand that trauma occurs as a response of the nervous system and that there are residuals of the experiences of trauma that reside within the body. Levine (1997, 2010) defines trauma as 'a response in the nervous system [that] does not originate as an event'. 'It is not the gravity of the event that defines trauma, but the level of experienced helplessness' (Levine, 2010; Levine & Kline, 2007). Further, VanderKolk (2013) states that 'trauma is about the residues that are left inside of you, the physical sensations, emotions and feelings that are happening in the

present that don't belong here. While the past is the past, the reality of trauma is that the residues of the past are active currently in the nervous system' (VanderKolk, 2013, p. 15).[2] 'Trauma arises when one's human immobility responses do not resolve; that is when one cannot make the transition back to normal life, and the immobility response becomes chronically coupled with fear and other intense negative emotions such as dread, revulsion and helplessness' (Levine, 2010. p. 67). It is not the story of what happened that needs to be undone but the trauma response held within the autonomic nervous system that needs to be allowed the innate completion process (Levine, 2010).

The human brain and nervous system: a brief overview

A very brief outline of the human brain and the nervous system may assist in understanding the autonomous nervous system response to trauma. This is also key to effective trauma therapy, as will be explained. The human brain is often referred to as the triune brain (Cozolino, 2006). This triune depiction is to describe the three evolutionary stages of cerebral development. The oldest and most primitive of these is the brainstem, often known as the reptilian brain. It is responsible for instinctual survival reflexes, heart rate, breathing and temperature control. The second is the limbic system, which holds the main structures for emotion, learning and memory as well as functioning as mediator for some of the primal instinctual reflexes. The amygdala and the hippocampus are part of the limbic system and have core functions in stress response. The third layer of the brain, the most recently evolved structures of the cerebral cortex, organises sensory, motor, cognitive and conscious experiences. The cortex is largely experience-dependent, as opposed to the brainstem which is largely organised through genetics. All three layers are linked together within an intricate neural network allowing the integration and co-ordination of motor, sensory and cognitive functions (Cozolino, 2006, p. 25).

While this is a simplistic description of a very complex organ, it gives a background for understanding the trauma response held within the body and potential effects of trauma therapy. Trauma is a psychophysical event that is evident through the nervous system. The human nervous system comprises two broad structures. The first is the central nervous system including the brain and the spinal cord and the second is the peripheral nervous system. In a global view, the central and peripheral nervous systems together form a communication pathway for the human organism. The peripheral nervous system has two further divisions, the autonomic and the somatic nervous systems. The autonomic nervous system is involuntary and functions as the organism's regulator and the somatic nervous system is voluntary, involving muscles and touch and proprioception. The autonomic nervous system also then has two divisions, the sympathetic and the parasympathetic nervous systems.

The sympathetic nervous system activates or mobilises the human organism and colloquially has been referred to as the accelerator. The parasympathetic nervous system functions to restore the normal organism functioning and rhythms and is referred to as the brakes (Hass-Cohen & Carr, 2008; Rothschild, 2000, 2003). The polyvagal theory of Stephen Porges proposed that the ventral vagus nerve (VVN) and dorsal vagus nerve (DVN) add a third neural subsystem alongside the sympathetic and parasympathetic nervous systems. Together these three subsystems substantiate evidence for the association between body behaviours and emotions (Levine, 2010).[3]

The human triune nervous system evolved as a hierarchical structure from primitive survival instincts to the more intricate social engagement and attachment behaviour system. Survival of the human organism is paramount. At the moment of a threatening situation, the amygdala fires as if setting off an alarm. This activates the sympathetic nervous system to produce adrenalin and the body prepares for flight or fight. At the same time, parts of the cortex shut down. From an evolutionary perspective, movement not thinking is necessary for survival. If flight or fight as the survival response is enabled and completed, then the amygdala is dampened as if the alarm is switched off. However, if the survival response was thwarted through being overwhelmed or through dissociation during the threatening event, the amygdala remains as if the alarm is on. An overactive amygdala is considered to be responsible for a wide range of symptoms associated with complex trauma, including hyper arousal, hyper vigilance, and emotional and somatic numbing such as shut-down. These experiences can remain active for decades (Levine, 1997, 2010; Ogden et al., 2006, p. 147f; Rothschild, 2000).

As stated, the amygdala and the hippocampus are part of the limbic system and have core functions in stress. The hippocampus mediates between the cortex (thinking brain) and the

amygdala (survival alarm). 'The hippocampus, however, is highly vulnerable to stress hormones, particularly adrenaline and noradrenaline, released by the amygdala's alarm. When those hormones reach a high level, they suppress the activity of the hippocampus and it loses its ability to function' (Rothschild, 2004, p. 2). For example information that could make it possible to distinguish between an attacker and the shadow of a tree never reaches the cortex. If the stress level is too high, the functioning of the hippocampus is shut down and rational evaluation is no longer possible.[4] The therapeutic focus on the cognitive with the intention to manage an overload of emotions, particularly fear, and the related body sensations is called the top-down approach (Rothschild, 2000, 2003). An approach to therapy such as Work at the Clay Field, which allows the kinaesthetic motor impulses to emerge first, then introduces sensory body awareness through the felt sense (Gendlin, 1981), out of which cognitive insights emerge, is called bottom-up (Van der Kolk in Ogden et al., 2006).

Chronic adverse childhood experiences have been linked to adult mental illness and developmental trauma. Levine (2010) emphasises that recovery from trauma does not require understanding and remembering what happened, but that the completion of the thwarted fight/flight impulse is crucial. And it is this completion that resets the structures within the brain and where individuals move from survival to living. Only then has the trauma ended.

Touch and haptic perception: a pathway to our neurobiology

Lusebrink (1992) associates the sensorimotor components in art therapy activities mainly with the limbic system which, as previously discussed, deals with emotions and survival instincts. The limbic system is profoundly affected in trauma, yet it is also this part of the brain that has the most effective capacity to restore the organism's regulation and equilibrium (Hinz, 2009, p. 39; Kagin & Lusebrink, 1978; Lusebrink, 1992). Through interaction with art materials such as clay, kinaesthetic experiences of physical actions and movements release energy and the sensory focuses on the experience of both external and internal sensations. Art therapy approaches that allow rhythmic movements, materials that offer resistance through weight and invite touch through their three-dimensional aspect, such as clay, or sculpting with stone or wood are the preferred mediums to stimulate the kinaesthetic motor function in individuals (Lusebrink, 1990 cited in Hinz, 2009, p. 59).

Sensory motor information processing develops early in human development. The Broca's area of the brain, also known as the expressive language centre, is located in the cortex and is activated during infancy to early childhood primarily through hand movements, not through auditory channels (Hass-Cohen & Carr, 2008; Rowe, 2008; Wilson, 1998). There is evidence that the hands are intricately connected to all three evolutionary hierarchical levels of the human brain and were instrumental throughout the ages for survival. Fight and even flight[5] responses throughout human evolution as well as development of communication, tool-making, hunting, the preparation of food and fire-making all depended on the hands of our ancestors (Wilson, 1998).

The use of the hands as a perception tool is called haptic perception (Elbrecht, 2012, p. 37; Grunwald, 2008). Haptic refers to the sense of touch (Patterson, 2007). Haptic touch is defined as 'an inherently active and exploratory form of perception involving both coordinated movement and an array of distinct sensory receptors in the skin' (Fulkerson, 2011, p. 493).

Touch is one of the fundamental human experiences. Touch is the basis for secure attachment, linked to earliest body memories, to the ability to handle the world, to sexuality and also to boundary violations and injuries. The world of early childhood is dominated by touch. The infant's perception of love and safety is almost exclusively defined through close skin contact, through being held and caressed (Cozolino, 2006). Tactile contact is the first mode of communication that we learn (Grunwald, 2008; Levine and Kline, 2007; Orbach, 2009; Rothschild, 2000, 2003; Wilson, 1998; Winnicott, 1964, 1971, 1986). Touch synchronises body rhythm, body temperature and emotions between mother and child, between family members and between lovers (Orbach, 2009, p. 43).

Touch can only happen in the present moment and is immediate. When hands touch clay the exteroceptors, originating from the five senses, and the interoceptors, the internal felt sense of connective tissue, viscera and muscle, become naturally stimulated, and every movement of the hands provides instant feedback to the brain. Cozolino (2006) states that the 'skin contains two different types of sensory receptors' (p. 103). The first of these communicates with the somatosensory cortex which is part of the cerebral cortex and these sensory receptors function to identify and manipulate objects. The

second set of skin receptors communicates with the structures of the brain associated with emotional touch. This communication pathway modulates skin to skin contact, soothing emotions, hormonal activation and sexual responses and is connected to the social brain. In addition, 'touch also leads to mild sedation, decreases in blood pressure and aids in autonomic nervous system regulation and cardiovascular health' (Knox & Uvnäs-Moberg, 1998; Weller & Feldman, 2003 cited in Cozolino, 2006, p. 103).[6]

Deuser (2004, 2006, 2007, 2009) and Elbrecht (2012) distinguish between three core ways of touch, which Deuser then applied in his ground-breaking Work at the Clay Field. His findings are based on the universal development of haptic object relations. These are skin sense, balance and depth sense, explained below.

Skin sense refers to sensory perception through touch with the flat hand. This is primarily experienced within the infant–mother relationship in the first year of life. It includes the unintentional reaching for objects, the infant's first exploration of the world, for example a baby's hand on the breast. Evident here is caressing, nurturing, soothing movements of the hands, a caregiver's communication of safety and love, and a state of being, of being with someone or something. In the Clay Field the skin sense can be stimulated through creaming of the hands and under forearms with clay to support self-nurturing impulses that were lacking developmentally; or appears as the need to caress simple, often rounded objects such as breast-like mounds. *Balance* refers to the communication between the hands and between the right and left brain hemispheres. Children learn balance in relation to parents and parental presence or absence, care or neglect. The more the parental poles move in unison, the greater the sense of balance in a child (Elbrecht, 2012). In the Clay Field this connection or rupture is projected into it as symmetry or asymmetry. *Depth sensibility* describes the active hand that penetrates, manipulates, squeezes, digs out and builds up. Depth sensibility is closely linked to the development of ego consciousness, the ability to handle the world. This is manifest as an individual with an intention and an active approach to the world at hand. Deuser links it to the father archetype (Elbrecht, 2012).

Additionally the hands can be thought to mirror Ayurveda and Chinese medicine's principles of the whole body of an individual. Thus the *base of the hand* relates to the abdomen as the emotional and physical core. The thumb is technically not a finger, but designed to execute impulses that arise from the base of the hand. The *centre of the hand* represents the heart and chest area as the 'feeling centre' in the body. The skin sense is closely linked to this part of the hand. The *fingers* with their ability for fine motor skills, and equipped with more sensory detectors than any other body part, generate cognition and awareness (Elbrecht, 2012).

Haptic perception is also linked to object relations, as in the Clay Field the hands also enter a relationship with the material and with each other. The clay, however, is neutral; it only feeds back whatever the hands project into it, every mark made in the pliable material. Through touching the clay the hands move and perceive the textures and qualities of the clay; they grasp, grab, hold and manipulate the clay. Work at the Clay Field, however, provokes touch as a means to find oneself: as I touch the other, I am being touched; as I make an imprint, this imprint reflects me. The material provokes basic needs such as to touch and to find the other, to grasp and grab to have for oneself, to find and know one's own rhythm with movement, to discover one's sense of unity and wholeness through balance (Brockman & Geiss, 2011; Elbrecht, 2012).

Furthermore, in the context of therapy, and as trauma most often occurs within the experience of relationships, especially developmental traumas, the initial motor impulses at the Clay Field will always reflect learnt biographical patterns of behaviour, such as with the below-mentioned client, who would not dare to touch the clay.

The trained Clay Field therapist is able to diagnose the hand movements in the clay. Haptic perception will indicate the age-specific needs and conflicts that present in the clay, such as how the client learnt to approach the world, perhaps with fearfulness. This is a predominantly non-verbal process. Clinical observations and embryonic research projects indicate that haptic perception in the Clay Field allows access to very early developmental stages, even pre-verbal infant stages. As the Work at the Clay Field proceeds, the hands can then be encouraged to find new ways to relate.

Clay as an art therapy medium and the Clay Field

As an art therapy intervention, working with clay typically involves the shaping and manipulating of the material with the goal of producing a product where both the process of creating and the product are considered to hold significance for the interior world of the creator (Henley, 2002). This product and process form of clay work stimulates

all of the body senses and is known to hold regressive qualities (Henley, 2002; Sholt & Gavron, 2006; Souter-Anderson, 2010). To touch the clay will inevitably trigger implicit memories of touch, whether that was pleasant, nurturing and sensual or whether it was hurtful and brought violation (Elbrecht, 2012). Rothschild (2000) cautions that for traumatised people, implicit memory can trigger states of dissociation and of fearfulness and terror along with other unwanted emotional and psychological experiences, such as anxiety, sadness or rage.

However, in Work at the Clay Field, hands driven by the innate memory are more concerned with creating and recreating implicit memories rather than the recall of specific trauma events. 'What happened is told by the hands through present moment experience of touch in the Clay Field, rather than through cognitive recall of memories' (Elbrecht, 2012, p. 125). As body sensations are projected onto the clay and acted out in the field, often the somatic experience occurs concurrently. For example, the hands may push, fight, twist, shift, hide and run and the clay be perceived as hot or cold, shifting, soft, hard, tight, loose and alive, and simultaneously the client may shake, breathe heavily, feel dizzy or restless and so on. As such, somatic reality and biographical memory, felt sense and sensorimotor actions reflect the interaction between the internal and external life energy of the client (Elbrecht, 2012).

Most traumas involve boundary violations, loss of autonomous action and loss of self-regulation (Van der Kolk, in Ogden et al., 2006, p. xxiii). 'As patients learn to tolerate being aware of their physical experiences, they discover physical impulses and options that they had abandoned for the sake of survival during the trauma. These impulses and options manifest themselves in subtle body movements such as twisting, turning, or backing away. Amplifying these physical impulses and experimenting with ways to modify them, ultimately bring the incomplete trauma-related action tendencies to completion' (Van der Kolk, in Ogden et al., 2006, p. xxvi).

Work at the Clay Field has the advantage of mirroring these physical impulses and it invites experimentation. Clients can try out what works and feels good, what brings relief and what does not. Most importantly, they can now complete unfinished action cycles that were interrupted through dissociation during the traumatic event, such as pushing an unwanted intruder away or ejecting clay from the field with palpable relief that they can now clean themselves of abuse. It is possible to act out ambivalent emotions towards a parent and discover safe, nurturing love through skin contact with the smooth clay. The actions of the hands will give instant feedback. At this stage it is crucial that the art therapist encourages sensory awareness, not cognitive perception, not just blind acting out of motor impulses, but that the client is supported in developing an increasing awareness of genuine needs and impulses. These will initially be wordless, but positive, fulfilling sensory experiences that over time can be recognised and integrated as new, more fulfilling paradigms of self.

Healing trauma and the Clay Field

In order that sensorimotor impulses are safe to discharge, and the trauma response can be found, it is a pre-condition to build the capacity for self-regulation. The phase approach in trauma therapy is considered to be the 'gold standard' (ASCA Guidelines, 2012). This three-phase treatment model dates back to the work of Pierre Janet[7] in the late nineteenth century. The first phase is stabilisation and safety. This is achieved through symptom reduction and building social, emotional and psychological resources. The second phase is trauma processing and the third is integration and consolidation (ASCA, 2012; Cloitre et.al., 2012).

The second and third phases of trauma healing at the Clay Field have been introduced with some detail. However, the first phase, described as safety and stabilisation, is critical before trauma processing can occur. Levine (2010) postulates a concept known as pendulation. Accordingly, 'trauma is about being stuck or frozen whereas pendulation is about the organismic rhythm of contraction and expansion' (Levine, 2010, p. 78). Levine refers to this as pendulating between the trauma vortex and the healing vortex. That is, there is an innate rhythm of contraction and expansion available to humans to get unstuck by knowing or sensing from the inside. Pendulation builds emotional and psychological resources of the client. This then incrementally builds the capacity for self-regulation and safety towards stabilisation.

In art therapy this pendulation is commonly introduced as the concept of a 'safe place'. In Work at the Clay Field, a trauma response of the hands needs to be met with an appropriate intervention to find safety in the setting before proceeding. This might be (1) to place the hands in the bowl filled with warm water, often perceived as relaxing, like taking a warm bath; (2) to find a hold at the edge of the wooden box; the field is firm, has corners and a solid base. It does not

move and has 'permanence'; (3) to distance physically from the field as the threatening 'other than me'; and (4) to rely on 'anchors' (Elbrecht, 2012). These may be created sculptures, symbolic objects such as crystals or talismans that are perceived as a resource of safety, strength and calm.

Only once this healing vortex is established may a client then proceed safely. The healing vortex is always within reach, should the traumatic memory become overwhelming. This process allows empowering, non-verbal self-regulation.

Therapeutic applications and a case example

As stated, trauma healing at the Clay Field has been extensively used with adults who have histories of abuse, adverse childhood experiences resulting in complex trauma syndromes and developmental trauma. Additionally, Work at the Clay Field has been shown to have significant benefits for children with attention deficit hyperactivity disorder (ADHD), developmental challenges and trauma.

Work at the Clay Field is a sensorimotor art therapy process that has been developed in Germany by Professor Heinz Deuser. There has been significant fieldwork and ongoing development of the Clay Field in Germany since the 1970s. However, it is only since 1992 that Work at the Clay Field has been introduced outside of Germany, in Australia where the first English-language publication of this profound work has been made available.

In Germany a number of schools and women's shelters employ a Clay Field therapist and this has been found to be most beneficial in work with children, particularly those with behavioural and learning difficulties. In Australia, Work at the Clay Field is used within private art therapy and psychotherapy practices with both children and adults. Anecdotal evidence supports the German experiences with children and the profound impact that Work at the Clay Field brings to adult individuals within the diverse range of contexts in which complex post-traumatic stress manifests.

More formal research on the nuances of the applications of Work at the Clay Field is desired and underway. Within the current knowledge and understanding, Work at the Clay Field is contra indicated for heavily medicated individuals living with unstable psychiatric conditions. This limitation is largely due to the potential decreased availability of sensory perceptions related to the medication regimes. Work at the Clay Field is always embedded within the principles of best practice in trauma therapy, as discussed previously.

Two case examples are presented to illustrate Work at the Clay Field. One is a visual representation of a sequence of a single clay field session (please see Appendix) and the second is a brief outline of 11 sessions with one adult client.

This 35-year-old female client (A) is happily married and is six months pregnant. (A) presents with a diagnosis of chronic fatigue syndrome and high levels of anxiety. The anxiety increases with concerns about the birth of (A)'s child and being a good enough mother. The Clay Field sessions are (A)'s first psychotherapy experiences. The following is a summary of 11 Clay Field sessions facilitated by one of the authors.

Session 1. To begin with, (A) cannot touch the clay. Just looking at the Clay Field, she dissociates. This session is therefore dedicated to 'getting to know' the Clay Field. With reassurance from the therapist, (A)'s primary focus is that she does not need to do anything. Gradually (A) learns to 'walk' in the field on her elbows rather than touch the material with her hands. She soon finds this exhausting and (A) collapses into the field onto her underarms and 'sleeps' (rests). (A) discovers the clay can support her without any conditions attached.

Session 2. (A) finds 'baby cycles' in the Clay Field according to her needs. Again (A) lies on the clay, her head often sideways as if the clay is a pillow. Here 'she sleeps, rests and eats', which is when her hands squeeze and knead small amounts of clay. (A) feels happy. Anxiety levels increase whenever (A) thinks that she should do something.

Session 3. (A) explores pushing the clay with her elbows while she rests. While doing so she has a physical experience of a voice that always prompts her 'to do something' outside of herself. 'It is not me!' This comes as a revelation. Both (A)'s parents were ambitious and controlling. (A) never discovered her own rhythm. (A) experiences life 'always in my head' and says this is why she struggles with intimacy with her husband.

Session 4. (A) announces that she has felt more energised in the past weeks. Again (A) like an infant predominantly uses her elbows and forearms, pushing with all her might, expressing anger, then collapses into paralysis and feels 'dead'. Next (A) pulls all the material towards herself, hugging it, then pushing it away, rejecting it. (A) realises compliance to 'be good' makes her motionless. Her inner urge is to take lumps of clay and drop them down. (A) then builds a 'castle as high as myself' and destroys it with glee. This is

object constancy which is achieved through creative destruction (see Winnicott, 1971).

Session 5. (A) reports this week that she has experienced 'good open lovemaking with partner' and expected a repeat, and was then disappointed when that did not happen. Again in this session (A) rests and sleeps in the field, then builds clay up and digs into the field 'like a dog'. As she rests, (A) hears her father's voice saying 'lazy cow!' (A) realises that her resting is resistance and the only way of safe protest against her father who was always critically focused on others.

Session 6. (A) reports that her anger is not manageable. There are explosive outbursts at home. In the Clay Field (A) digs all the material out with fury, pushing it further and further away on to the table. She slams the clay onto the floor, swearing. (A) now claims the empty field as 'my space'. She fills it with water, splashes within it, drums in it, sings and laughs.

Session 7. (A) is no longer collapsing into the field but needs support and encouragement to not experience life as overwhelming and intense. Now (A) plonks her fists into the clay 'like a gorilla'. (A) grunts 'I am strong. I can deal with resistance'. She builds a house in the clay. (A) describes it as lumpy and creative on the outside and soft on the inside. For the first time (A) becomes concerned about the boundary of the field and the lack of boundaries in her life.

Session 8. (A) experiences a profound assurance that she is safe from this session. In the Clay Field (A) digs a hole in the centre and calls it a 'cave'. She pours water into it and then allows her hands to move in and out of the cave. The surrounding clay becomes two breasts and (A) relishes the skin contact. (A)'s entire body shakes, discharging tension and fear long held as her hands rest inside the cave. (A) shares that she was separated from her mother at birth for several days for medical reasons. (A) now feels profoundly safe. This is reassuring.

Session 9. Anger and tears mark this session. (A) builds a mound of clay. She holds on to the hill and discovers the hill does not go away. 'It is there for ME'. (A) experiences great relief. Again object constancy is achieved.

Session 10. After bathing her hands in warm water, (A) digs a hole in the centre of the field and fills it with water. Here (A) experiences peace and then tension. There is too much work waiting for her at home. Slowly, handful by handful, (A) clears the entire field and realises she does not need to do everything in one go, she can take little steps and it will not be overwhelming.

Session 11. (A) acknowledges that she can feel now, she grieves and cries and that this is new. She empties the entire field, lies in it, rocks and sings, 'I got rid of the old garden, I can plant a new one now. I got rid of the old trauma. I can enjoy life now'.

(A)'s baby boy is born six weeks later. She comes for two more sessions after this time, both of which are for minor anxiety episodes related to going into freeze when her son cries and she feels helpless. For these two sessions (A) goes to the Clay Field in a similar manner as sessions 10 and 11, repeating the steps within these sessions.

In the Clay Field (A) discovered the sensorimotor needs of her infant self. There is little focus on what happened to her and the story of the past. What her hands claim are the developmental needs of her infant self. The clay becomes the ultimate transitional object; it is constant and reliable. At all times there is a motor impulse which gives way to a growing awareness of her internal and external senses. The Clay Field allows her to first trust her motor impulse, to find her own rhythm and then step by step her own needs are fulfilled. Through the bottom-up approach (A) discovers her unique sensory awareness, including her feelings, and leads to new cognitive insights and an opening to rewrite her life script.

Conclusion

The body remembers. It remembers its injuries and traumas, but it also remembers its needs, its instinct to survive and to heal. Adverse childhood experiences are correlated to developmental trauma in children and complex post-traumatic disorders in adults. The 'gold standard' of best practice in the treatment of trauma is inclusive of a bottom-up and top-down approach, which is embedded in the Pierre Janet phase approach to trauma therapy.

Trauma is a psychophysical event that can result in residuals of these experiences being held within the body long after the event and are manifest through the human psyche, relational system and nervous system. Approaches to therapy that allow kinaesthetic and motor impulses to 'lead the way', giving rise to emergent sensory and cognitive awareness, are known as the bottom-up approach. The use of the hands is known as haptic perception and involves movement and sensory impulse.

The hands are representatives of the body in the symbolic world of the Clay Field. They are capable of finding solutions by connecting with the most ancient parts of the brain in an often

astounding and creative way. Clinical applications of Work at the Clay Field are suited to both adults and children, enabling trauma to be processed and thwarted responses to the events to be completed.

Notes

[1] Work at the Clay Field® denotes a registered trademark.
[2] National Institute for the Clinical Application of Behavioural Medicine transcript of webinar with Professor Bessel van der Kolk, May 2013.
[3] See Levine (2010) for details on Porge's polyvagal theory and trauma. DVN involves primitive responses of shut-down or immobilisation while VVN involves social engagement behaviours, muscles in the face and the middle ear (p. 99).
[4] However, 'the hippocampus is also a key structure in facilitating resolution and integration of traumatic incidents and traumatic memory. It inscribes time context on events, giving each of them a beginning, middle and—most important with regard to traumatic memory—an end. A well-functioning hippocampus makes it possible for the cortex to recognize when a frightening event is over, perhaps even long past. Then it instructs the amygdala to stop sounding the alarm' (Rothschild, 2004, pp. 2–3).
[5] Flight refers to the time of human ancestorial primates living in trees and their movement from tree to tree. See Wilson (1998).
[6] As cited in Cozolino (2006).
[7] Pierrre Janet (1859–1947) was a French psychologist, philosopher and psychotherapist in the field of dissociation and traumatic memory. He is considered one of the founding fathers of psychology.

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Appendix

Figure 1. First impulse to push.

Figure 2. Increasing pressure.

Figure 3. Using fist to eject unwanted material.

Figure 4. More pushing to clear the ground.

Figure 5. Sliding the remaining material across the ground smashing it into all four corners of the field. It has to gain permanence to survive it all.

Figure 6. The self has been retrieved.