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Trauma Never Occurs Only Once: Being Traumatized by a Slap is Like Making Meaning of the Game of Peek-a-Boo

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ABSTRACT

It is argued that the lack of a normal developmental perspective along with a dominant psychopathological perspective framing our thinking about trauma limits our understanding of trauma, the value of trauma theory, and trauma informed practices. A developmental perspective sees dysfunction emerging from chronic repeated experiences and processes, primarily external interpersonal relational experiences and internal somatic and brain – neurosomatic processes. Repetition of trauma occurs because of the individual's on-going endogenous reiterated neurosomatic meaning making processes of the meaning made of a recurrent or singular event given the flow of the context in which it occurs. Thus trauma, for me, is like a bulge in a landscape that we note in our language and diagnoses as if it was the only feature of the landscape, but typical trauma is in fact just a more severe outcropping on many small and large bumps making up a desolate toxic landscape. And while becoming traumatized is hardly a game, the process of making meaning of it and of a game, such as peek-a-boo is pretty much the same. At the heart of the similarity is the repetition of endogenous meaning making processes which most often, but not always because there are single occurrence events, travel with the event's exogenous re-occurrence. The repetition instantiates the trauma and the game into the individual's way of experiencing and being in the world. Thus, what makes sense for us as a guide for therapy – for children and adults – is to take our cue from the development of meaning: Approach therapeutic change like learning peek-a-boo. Do it often, do it in multiple ways that fully engage every level of the individual, and let the individual agenically control the process.

I am not a trauma theorist, and worse still I don't see trauma as *the* mechanism driving dysfunction or psychopathology. Rather, I am a developmentalist that sees developmental and lifelong dysfunction emerge from chronic repeated experiences and processes, primarily external interpersonal relational experiences and internal somatic and brain – neurosomatic – processes. Beyond development, I adhere to open systems as influenced by psychodynamic frameworks (Harrison, 2003; Sander, 1977; Tronick, 2005; Tronick, 1998). For me the lack of a normal developmental perspective along with a dominant

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psychopathological perspective framing our thinking about trauma limits our understanding of trauma, the value of trauma theory, and trauma informed practices. Were I smart enough I would not use the term trauma at all Van der Kolk, 1994. For me it is a bulge in a landscape that we note in our language and diagnoses as if it was the only feature of the landscape, but it is in fact just a more severe outcropping on many small and large bumps making up a desolate toxic landscape. Moreover, it is a constantly changing landscape. Nonetheless for now I am stuck with the term. So you see already that I take a pretty jaundiced view of what is typically thought to be trauma and I would like to think I will provide a different view of trauma.

To put it bluntly and to overstate it, even though it is rare in cases of abuse and neglect a purported traumatic event that in fact physically happens only once is never experienced only once. Repetition of it occurs because of the individual's on-going endogenous reiterated neurosomatic meaning making processes of the meaning made of it. And while becoming traumatized is hardly a game, the process of making meaning of it and of a game, such as peek-a-boo is pretty much the same. At the heart of the similarity is the repetition of endogenous meaning making processes which most often, but not always because there are single occurrence events, travel with the event's exogenous re-occurrence. The repetition instantiates the trauma and the game into the individual's way of experiencing and being in the world.

One more thing: The focus of my clinical and research work is on infants and young children, and their parents, and this paper will draw on that work (Tronick, 2007). I think it is quite relevant to adults. However, I am not an attachment theorist (E. Z. Tronick, 2003). While useful, even powerful, it is too static and a-developmental a conceptualization. It is time to move on from it to the domain of ongoing processes and experience. I won't be providing you with a new technique, but perhaps a challenging framework. In fact, I will challenge the notion of trauma as it is wedded to attachment and the trauma-informed zeitgeist as they are typically framed.

My thinking focuses on the formulation by Bruner (1990) that humans are makers of meaning. The term *makers* is critical. It emphasizes that humans are actively engaged in the process of making meaning. I see meaning making about one's self in relation to the world of people and things, and to one's own self, as a core organizing concept in therapeutic approaches as varied and contentious as body psychotherapies, psychoanalysis, psychodynamic, CBT, dialectical cognitive therapies, dyadic therapies, attachment, relational therapies and others (Tronick, 2007; Harrison & Tronick, 2007; Ogden, 1997; Modell, 1993; Fonagy and Target, 1998; Tronick, 2003). Meaning is central to the phenomenon of trauma, but the focus is typically on the event itself (e.g., sexual abuse) as if an event is always a trauma to all individuals, rather than on the meaning made of the event by an individual, its context, its effects on the meaning of other events, and its critically how it changes over time.

Meanings are made continuously and simultaneously, in real time, at multiple levels, and by multiple somatic and neurologic systems, neurosomatic meaning-making systems. Loss of any of these meanings – the meaning about oneself to oneself, or the relation of one's self to the world results in serious psychological dysfunction and psychopathology. Modell (1993) said that the failure to "make meaning" is a psychic catastrophe, which is typically labeled a trauma. From a developmental perspective, however, more common than failures to make meaning, are the meanings made about more mundane events that distort one's

sense of the world and sense of one's self. The sneering, mocking look from a parent when a child somehow fails to fulfill the parent's unspecified desire that leads to the child making the meaning that she is defective and ineffective, and her world is filled with contempt. And keep in mind that the process is not just of the moment, it is not one-and-done. The experience is sticky. Neurosomatic meaning making processes are endogenous and continuously operating. They keep on going and going affecting the meanings made as life moves on. Worse still, the initial meaning made goes on to affect the next meanings made. Those later emerging meanings generate further distortions and increasingly insidious debilitations that indeed may be far more derailing than the initial meaning made of the experience.

The continuous process of meaning making conforms to the larger framework of open systems (Tronick & Beeghly, 2011; E. Z. Tronick, 2003). A first principle of the ways in which all biological organisms grow and develop is that systems must gain resources – energy and information – to maintain their organization, to grow, and to develop. Failing to gain energy leads to dissipation of organization, aka death. A child consuming milk thrives, builds muscles, increases brain cell number, and energizes growth promoting bodily processes. A child consuming chips builds fat, diminishes brain cells, and energizes short and long-term debilitating bodily processes. So too with the child's mental development and growing understanding of their world. Of course, nutrients are necessary, but the nutrients that grow mental development and understanding of the world are not physical nutrients. Rather the nutrients are the information appropriated during the individual's engagement with the world, which meaning making processes make meaning of that increase the individual's sense of self in the world. Think only of the primate deprivation studies or the human sensory deprivation studies to understand how a poverty of information distorts and disrupts development. In the context of trauma, think about the effects of neglect, a form of deprivation of relational information.

A consequence of the first principle of an open systems demands that an individual must actively and continuously engage with the world in order to gain necessary resources. The active appropriation of resources allows the individual to integrate the new meaning with past meaning into their current and yet evolving meaning of the relation of their self to the world. Again, keep in mind that meaning making is neurosomatic. Neurosomatic meaning making is highlighted by infants' meaning makings. In infants, meanings about the world, such as this person is a stranger and scary, are made without language and advanced cognitive processes, an immature brain, and still developing regulatory systems. Or think of a five year-old child whose autonomic nervous systems set point for threat is low, such that small stressors lead to full-fledged fear reactions. As a result, the ambient meaning of the world is that it is dangerous and threatening. And the lulls of fearfulness are likely short lived because the process is ongoing, and the meaning lingers and affects the meaning of even benign events. The process of making sense of the world and one's relation to it inherently involves the whole individual in an endless and continuous process.

A developmental open systems perspective holds to a view that *all* current experience affects the meaning made by an individual and to the extent possible the individual should – must – have *agency* to determine her engagement with the world and with others on a moment-by-moment basis (Sander, 1977). Thus, the individual can take hold of information to endogenously create new psychobiological meanings and ways of being in the world. I see the meanings about the world and the self as assembled into a neurosomatic state of

consciousness (Tronick, 1998; Tronick & Beeghly, 2011; E. Z. Tronick, 2003). The state of consciousness guides the individual's engagement with the world. But it is not static. For example, descriptions of my still-face paradigm refer to its "signature" effect – the infant turning away, being distressed and fearful, yet the infant still feels effective – "*I can get you back*" – and keeps trying to elicit the mother. But that state of consciousness changes over time with longer exposure to the still-face. The infant stops eliciting the mother, her posture collapses and she generates a helpless state of consciousness. An implication is that the typical view of trauma that sees it as static is incorrect. Like the meaning of the still-face, the meaning of a trauma changes. The change is brought about by ongoing external and internal experience, which modifies the meaning made of the experience over the course of daily living and development. And its meaning and the changes of meaning affect the meaning made of other events and of the self.

It is perhaps a bit of hyperbole to say that a developmental perspective holds to a view that *all* current experience affects the meaning made by an individual. But note first that the typical view of trauma is that it affects all experience for all time and is the primary event leading to psychopathology. Critically, and in contrast to many views of the singularity and power trauma, the developmental perspective qualifies the *all* with the principle of reiteration: the *all of* experience that affect the meanings made by the individual are chronic reiterated experiences (Perry, 2008; Tronick, 2007). A strict definition of trauma, the typical pointing to an event as *the* traumatic event, and the static self-contained view of trauma do not consider reiteration of the event, its context, and the meaning made of those features and how the meaning changes. We will come back to this "*all.*"

What do we mean by the re-occurrence of experience? It is that events and the experience of them have their effects because of their reiterated occurrence and the individual experiences of them and her endogenous neurosomatic making of meaning of them many, many times. Not to be fatuous, events that shape an individual's meaning about the world is like learning to play peek-a-boo. How does a child come to know the game of peek-a-boo (Bruner & Sherwood, 1976; Commons et al., 1998). The game of peek-a-boo is a dynamic interplay of actions and information between a child and an adult. The game is rule-governed but flexible in its enactment. Often there are unique individual and familial variations. Despite our saying that a four-month-old plays peek-a-boo, we recognize that young infants do not actually play peek-a-boo. He has no idea what is going on, though it has some indecipherable meaning for him; after all, they react to the adult's actions. It is played "at" the infant by an adult, who initially plays *all* the sides of the game. The infant makes a large number and variety of behaviors and has lots of varying intentions and apprehension about what is going on, many of which are unrelated to the adult's game-playing actions. The infant looks away when she "should" be looking toward, or she raises her shoe or looks at her hand. What she is doing is messy – variable, unstable, disorganized. Yet, with re-occurrence, the infant attends and begins to anticipate the coming "boo," and some of the messiness is repaired and pared away. With more re-occurrences and development, the infant begins to become agenic and to control some of the elements and the pace of the game. She comes to signal the timing of the "boo," and her reactions become more coherent and contingent. As the game is acquired, the infant begins to learn pieces of how to be the "surprise" and then the "peek-a-booer." Sequences and rhythms emerge.

While all that is going on for the infant, the adult continuously makes adjustments (e.g., holding positions longer) in relation to the infant's actions and her intent; what Bruner calls

scaffolding (Bruner, 1990). Such scaffolding is intuitive and implicit. The selective assembling of the infant's self-organized actions and intentions, *and* her apprehension of the adult's actions and intentions, *and* the adult's reciprocal apprehension become incrementally more coherent. Their mismatches get repaired. And so on, through endless repetitions, until the game is entirely "within" the child and, at the same time, fully within the child-adult dyad. Simply put, coming to know peek-a-boo is a messy process that is slowly sculpted over repetitions by repairs of the messiness. Moreover, its meaning for the child changes from (perhaps) something exciting and fun to something done with the carer, to a game done with others, to (finally) a boring game: "*I don't want to play anymore*." And none of this knowing is explicit until the second year, but before that it is simultaneously embodied in multiple psychobiological systems.

A few points about the process of acquiring the game: acquiring a game depends on the infant being with someone who knows the game and who must be willing to "teach" her the game. Infants cannot teach themselves the game. At any age, the learning of the game depends on the repetition of the game and the development of different capacities at multiple levels (neurologic, regulatory, motor, emotional) that make the acquisition of a game possible. A three-month-old does not have the capacities to learn the game no matter how often its re-occurrence. The game is individualized. The adult who is playing it with the infant plays the game in a unique way, and the infant acquires that unique way. Better said, they co-create a unique way of doing the game together. In an important sense, they co-create a unique game of their own. Co-creation is critical for understanding the other games children learn (Tronick, 2017). Like all children's games, the game is arbitrary, in the sense that it has a history in a cultural context. It is not built-in by evolution. It is a canonical cultural artifact, played in the way it is played in a particular culture (Bruner, 1990). Other cultures play other games in their own cultural form.

More generally and importantly, we see the acquisition of a game by an infant as no different than the infant coming to know any other cultural form of behavior or any form of procedural knowing which involves spontaneous – "natural" – interaction; that is their way of being with others. The infant comes to know the "game" of cuddling, the "game" of feeding, and the "game" of greeting a stranger. Infants develop the "game" of being demanding, the "game" of taking a bath, and the "games" of changing, nursing, and going to sleep. Each of these "games" re-occurs 10′s, even hundreds, of times a month. Each has a form that is individualized and culturated. Each is dynamic and changes with experience and development of new capacities. The process of acquisition is messy and requires repairs. And each involves repeated experiencing of the "game" with another person to finally get it into the infant's state of consciousness. And the form it takes in the infant reflects the form of the "game" in the adult's state of consciousness because its form guides how the adult plays the game. To jump ahead, the infant who comes to know the particular form of the "game" of being abused also comes to know the particular form of the "game" of being an abuser that is in the abuser.

I hope that this account of normal developmental process of learning "games" – actually learning how to be in the world – is starting to have some linkage to our understanding of trauma. Let me make the linkage of this kind of developmental process of coming to know how to be in the world by the child coming to know the "game" of being slapped. Of course, being slapped is not a game and peek-a-boo may seem far away from trauma, and it is, but

for our purposes, it is not. Getting slapped is clinically relevant as such, and it is a metaphor for thinking about the trauma associated with any event.

To begin, the physicality of slaps is not the same (Tronick & Perry, 2014). They vary in intensity, and they vary as to the target. Here think about a slap to the face of moderate intensity. The first slap a child receives is not experienced the same way as the tenth; it is unique. It changes the child's state of consciousness about the world and meaning making. But so does the tenth slap, as it must because the child has made meaning of the nine preceding slaps, and the tenth has to be integrated with those that came before.

Moreover, the slaps are not the same depending on the motivational state of the child. It is different if she is slapped when she is concentrating on a game and feeling safe, or hiding and in a fearful state, or in an angry state. Moreover, in the next moment after the slap and then for succeeding moments, her state will change, and with it the meaning of the slap will change. With mental and physical development, the "same" physical slap is experienced differently at two years of age, at five, or at ten years, and different if, at ten years, it was last experienced at two years, or five years, or never experienced before. Furthermore, whatever agenic actions – fighting back, running away, freezing – the child takes will change the nature of the experience of the slap. Just imagine the difference between a three-year-old kicking the slapper or running away and hiding behind a couch. And to further complicate the picture, the context matters. Was the child in and around the slapper much of the time? Was the slapper a stranger? Was the slapper a parent, a carer, a babysitter?

And there is more. First, suppose the slapper is someone who regularly cares for the child and is the slapper. In that case, we know that their caretaking will be at the very least problematic if not even continuously derailing. Slappers don't parent well; they are angry and threatening, demanding, neglectful, falsely apologetic, or whatever. What they are, in fact can affect the child's experience of a slap. A slap in anger is not the same as an apologetic slap (whatever that might be). As a consequence, the child is under continuous pressure from that distorted problematic caretaking. Its effects could be enough to derail the child's development even if there were no slaps. Importantly, the experience of the problematic caretaking exacerbates the effects of a slap. Even a single slap in the context of disturbed parenting could be enough to disrupt the child's development. Moreover, when we say a particular event is traumatic – a slap – my bet is that it might not have so debilitating an effect except for the already vulnerable state of the child, given the reiterated problematic caretaking they have received. So is a slap, a fast physical event taking only milliseconds, really an acute singularity?

But there is more. It is not only the occurrence of the slap or the disturbing parenting that will derail the child. We all know about the triggers of trauma that are present all around the child all the time that re-ignite the experience. They are unavoidable. But the child will trigger themselves. Saying that is not blaming the child; it is blaming how evolution has organized how humans make meaning. The child will make meaning of the slap and caretaking and she will keep on processing it. She will reexperience its vagal and HPA effects, memorializing it, perseverating on it, reexamining what happened, and what she did. Most insidiously, she will anticipate it happening again. The self-generated reoccurrence, self-generation of triggers, goes on and on with continuous, never-ending meaning making processes, processes that feed upon themselves.

These self-generated meaning making processes with an older child or adult may be explicit and in awareness as well as in the body. In an infant or younger immature child,

they will be neurosomatic, the processes that make meaning completely out of awareness. For example, a lower fear threshold in the amygdala that generates the experience of fear of benign events and leads to more internal fear and anxiety. We often see these physiological forms of trauma in our patients when they only have the feeling of the event but can't provide details or a timeline. This lack of a narrative is because neurosomatic forms of memorializing do not generate timelines; your gut biome does not track dates and details of events, but it does affect meaning making.

For those of you who focus on the brain, let me give a brain-oriented account of meaning making of experience with something like a slap (Tronick & Perry, 2014). The primary mechanism in meaning-making by the brain is the capacity to create associations. When patterns of neural activity co-occur with sufficient frequency, intensity or pattern, these patterns become "connected" at a synaptic level. But these synaptic connections are not "empty"; they have content. Perry's neurosequential model (Perry, 1999, 2008, 2009) makes it clear that the capacity to weave content – the complex array of sensory, somatic, and cerebro-modulatory patterns of activity into a form of coherence is one of the remarkable qualities of development. Indeed, development requires the sequential creation of associations – essentially, sequential meaning-making – from body to brainstem to cortex.

Beginning *in utero*, the meaning-making systems (typically, but artificially referred to as "body and brain," which is a linguistic dichotomy, not a physiological reality) weave together seamless multiple interactive dynamic systems through multiple molecular mechanisms. These mechanisms include the creation of "activity-organized" synaptic nets that begin to create meaning for the developing organism. The sensory and somatic "external" input from the intrauterine environment (warm, fluid embracing, ever beating maternal heart sounds, voice, and such) experienced by the fetus becomes associated with the neural activation created. For the fetus, it carries the meaning of being "safe and regulated" (i.e., not hungry, thirsty, cold, or threatened). The operation of the neurosomatic systems, and their re-occurring neural activation rhythms hold the meaning.

Later in the ex-uterine environment, rhythmic rocking, for example, may have a primordial meaning of "safe," a meaning inherent in coherent somato-sensory organization. A frightened or overwhelmed child may self-soothe by rocking in the fetal position as an attempt to recapture or may actually create that primordial meaning of "safe." Similarly, other meanings, such as "the world is a dangerous place," are also held by bodily processes in conjunction with the brain, such as the immune system, the autonomic nervous system (ANS), gut biome, as much as by the brain when the child (or adult) when the child (adult) is unable to generate coherent patterns of neural activity (Porges, 2011). And like the plasticity of the brain in response to environmental input, other neurosomatic processes are organized and sculpted by the early experiences, even though the conscious mind does not have access to the early experiences that created that meaning.

Neurosomatic meaning making makes it clear that even though the young child's somatic and neurophysiologic systems are far from fully developed, she can make meaning. She has states of consciousness, though with no implication of awareness. As such, the infant can fully organize a motivated and embodied state of distress, perhaps even an emotionally fearful state, or a motivated state of pleasure that organizes her actions in the world: one state leads to withdrawal and demands for regulatory support, the other to engagement and self-directed action on some object or communication with another. Thus, the process of meaning-making begins with the first experience to create the primary

associations (i.e., neural connections) that will organize the infant's world. And keep in mind that *all* of the neurosomatic systems continue to operate in the adult. They continue to make meaning: the wash of adrenalin after a near-miss car accident when you consciously know everyone is okay. And these systems continue to bring the meaning of events in the past into the adult present: the feeling of terror with an ocean wave curling at you from an unremembered thumping by a wave when you were 5, even though now you know you are safe.

Returning to the case of a slap, the first time the infant is slapped, the image of a hand moving swiftly across the visual field has not yet been associated with pain. If the slapper is always the same person and others never slap the child, the set of somato-sensory associations may generalize to the properties of that person or the place where the slapping occurs (i.e., the bedroom). The child may begin to feel fearful with the sound of the slapper's voice, the smell of his aftershave, the image of his face, the sound of a door closing, etc. And the child may then generalize from the slapper's hand to all hands moving quickly near his face – even if the person is a nurturing caregiver, moving to gently caress his face. These associations and the resulting threat-related behaviors are mediated by the simpler, lower somato-sensory and action – motor – systems involved in stress and the threat response.

These more generalized and undifferentiated responses can be quite troubling and mystifying to an individual experiencing, even when the formative experiences are part of the "known but unremembered" aspects of a person's life. Though unavailable in conscious memory, they are nonetheless stored in the brain and body's operating patterns, activation preferences, set points, thresholds, etc., throughout the body and encoded by implicit neural processes that are remarkably durable. Traditional talk therapy may not be sufficient to access these sub-cortical organizers of experience. Directing attentional processes to the body, a core feature of sensorimotor psychotherapy, can stimulate neural circuits associated with these memories, providing opportunities to encode new experiences that support a shift in meaning and subsequently, a shift in experience (Ogden & Fisher, 2014). Indeed, in infants, Piaget argued that their first meaning making system was sensory-motor.

This picture of what is going on gives us a critical idea of why early experience has such long-term effects. The meaning-making process in infancy is developmentally robust because so many meanings are connected to fundamental regulatory processes. These regulatory processes are shaped by early experience and continue to operate later in development in similar ways unless they are re-sculpted by experience or therapy. Thus, many of the associations created early in life are directly linked with neurosomatic processes – primary regulatory neural networks and primary somatic processes – that continue to shape and influence the meanings made throughout life unless they are re-tuned by experience or interventions. Moreover, the infant has less capacity to modulate or shift the meaning because the higher areas of the brain are not yet fully organized. That is, for example, the infant does not yet have complex time-telling capabilities or abstract cognition to allow her to make a more "abstract" or differentiated meaning about the one abusive slapper in relation to other nurturing carers. These gaps in capacity make the infant more vulnerable.

As the child becomes older and the limbic and cortical areas of the brain become more organized, the meaning of the slap, the slapper, and the toddler's potential to act in relation to the slapper with behaviors that appear to increase or decrease the probability of slapping, change and become more coherent and complex. The infant "learns" (comes to know at an

implicit pre-conscious level) for example, that crying (a "fight-flight" stress-related behavior that should bring a carer to meet the infant's distress: i.e. hunger, thirst, cold, pain, etc.) will actually increase the slapping, whereas dissociating (and not crying) will decrease the slapping. As a toddler, she may also learn that overly compliant, almost seductive behavior will reduce slapping. And she may modify her meaning about slapping. Let's say her mother – a loving but overwhelmed and frustrated caregiver who never slapped before – slaps her in frustration when she is non-compliant (noncompliance is *not* possible for her with an actual repeated slapper, but it is with this mother given their history). Almost immediately, there will be a physically nurturing and intimate interaction as the guilty mother attempts to repair the empathic rupture (not an unusual dynamic with an overwhelmed mother and an abusive partner – the initial slapper). This change in meaning is now possible because of the development of neural systems previously unavailable to the infant. The "meaning" of the slap evolves.

This process of changing and creating new associations requires plasticity of neural networks. Fortunately, neurons and neural networks are not only capable of change; they are specifically constructed to change in response to experience. This plasticity underlying both developmental and therapeutic change has conditions that will enhance and others that inhibit meaningful change (Kleim & Jones, 2008). Two primary principles of plasticity are specificity and pattern. Simply stated, neural networks that are not being activated with sufficient repetition in a meaningful pattern will not change. And let me add that plasticity applies to all the somatic regulatory systems that are sculpted by early and ongoing repeated experience.

And this principle brings us back to my view of trauma. To start, the principle of repetition implies that there is no such thing as an acute singular traumatic event, an event that happens only once. It is an ongoing process. Not to be difficult, the principle is both false and true. Allow me to state the point in the extreme: singular acute traumatic events are not different from repeated events. The meaning of an event is reiteratively processed by an individual over time, maybe over a lifetime; it lingers. Second, the meaning of the event is affected by and affects the meaning the individual makes of other events; its meaning is not static or fixed. Take an example other than a slap, the acute event of a never-to-be-repeated one-time sexual abuse of a young girl by a stranger never to be seen again. It happens only once; it is singular, but is it really? Certainly, it is what we point to, and it *can* have lifelong effects, but not in the sense that it is a "thing," a lesion, an object deep in the psyche of the individual. From a developmental meaning making perspective, the trauma is not singular. The occurrence of the event may be singular, but the meaning of the trauma is not anchored like a crystallized rock in the psyche. The processing of the trauma is ongoing; in that sense, it is repeated and can have life-long effects.

To start, there are internal neurosomatic meaning making processes – autonomic nervous system, HPA axis, and brain processes of memory, rumination, perseveration, and dissociation – that continue to operate on the meaning of the event. The meaning is repeatedly *re*processed. The operation of these neurosomatic meaning making processes actually alter the meaning over time, even if the individual is not aware of the change. In the case of children, those meaning making processes develop (e.g., cortical processes come on line), further changing the meaning of the event.

Second, the meaning of the acute event affects the meaning of other experienced events. One obvious process is how the young girl's initial meaning of the event – "*I was too*

trusting" – affects and is affected by future interactions. Perhaps that meaning disrupts her relations with others which in turn makes her even more distrustful. And then those newly emerging meanings have their effects on the meaning made of subsequent events. Third, the acute event does not exist in isolation but is affected by "*all*" current and ongoing experience. The "*all*" includes what was going on when the event occurred, the meaning being made of other events, and the evolving context over time of the event. Perhaps the young girl's other on-going relationships so robustly contradict the distrust and give her a sense of safety and certainty which in turn makes her more trustful, or perhaps the stranger was gentle with her at first, and any later sensitive contact provokes fear no matter who does it.

This account of what we refer to as a single-one-time only traumatic event when we talk about our patients should, I hope, make it clear that they are actually repeated events. Nonetheless, there are differences between the singular and repeated events. An event that is repeated triggers the host of processes again and again. Its effects are more likely to accumulate, be more intense and affect a wider range of experiences and the individual's sense of their world. Nonetheless the repeated event is in the context of other events, and there is a high likelihood that they are distorted and pathological. As with the slap, if the young girl is repeatedly abused, the likelihood that the rest of her world is "normal" is vanishingly small. In fact, the distortions of the rest of her experience further exacerbate the consequences of the "event." Escaping their effects will be more difficult.

How does the evolution of the complex archeology of the meaning of the slap, peek-a-boo, being with another, or any way of being relate to therapy? For me, therapy is about changing meanings. How do we see the change process? Obviously, a myriad of driving forces and systems are involved, that are inherent to making and changing meaning, including somatic and regulatory systems, neural systems and action systems: the list goes on. My view of therapeutics is very much Vygotsky (1978): optimal development in any domain (e.g., neural, regulatory, motor, sensory, etc.) occurs when the individual is given opportunities and expectations, usually by or with another person, that are neither too familiar and simple, nor too unfamiliar and complex (Perry, 2009; Tronick, 2007). The individual with a psychic dysfunction has to be allowed to select or guide the information that she is presented with such that it fits, and can be worked on by her meaning-making capacities to make new meanings.

I would emphasize (Tronick & Beeghly, 2011) that therapeutic work with infants and young children must aim to understand deeply their intentions, the multi-level meanings that children are making about themselves, how they are making it within themselves, by themselves with objects, and most importantly with others. In adults, it is critical to determine where the meaning "resides." It may reside in the prefrontal cortex (as is presumed by cognitive therapies). Still, I believe much of it resides lower down in the brainstem, with regulatory and somato-sensory processes This multiplicity of neurosomatic processes demand forms of therapy that reorganize those processes through re-occurrent experiences, which may eventually make the distorting experience available to awareness.

One implication of multiple levels and kinds of meaning-making systems is that therapy cannot simply or solely focus on just one system, be it the somatic, or neural, or action, or cognitive, or emotional systems. What development tells us about meaning making and change is that it involves all these systems simultaneously operating as a messily organized ensemble. More specifically, change involves an individual who has agency to organize her engagement with the world, especially the world of people, with every level and every

meaning-making system she possesses. But development also tells us that therapeutically induced change in meaning must enact the first principle of reoccurrence. The individual must have the opportunity to engage and reengage in experiences that can change and generate new associations and operations of regulatory systems at the core of meaning making.

The demand for enough experiences to allow for change is especially critical when we consider early meanings that are interwoven with fundamental somatic and regulatory processes. Admittedly we don't know what "enough" is, but we do know that seldom is there enough re-occurrent experience in the right systems (i.e., the bedrock associations created by our earliest somato-sensory experiences in the lower areas of the brain). Most targeted therapeutic efforts do not adhere to the core principle of specificity; *non*-somatic therapies in and of itself will not directly and repetitively activate the foundational somato-sensory systems (and related associations) made in early life and localized in the lowest systems in the brain. Somatic therapies will not directly affect and repetitively activate higher order brain systems. Thus, as argued from the beginning, meaning making and therapeutic change involves a simultaneity of systems at all levels of the hierarchical organization of the brain and body.

More generally, our emphasis is on the multi-level psychobiological nature of meaning-making has a specific implication for therapeutic interventions for trauma. No single therapeutic approach no matter how powerful, will be an adequate therapeutic intervention. Trauma therapy, as well as any therapy for any problem, must take multiple forms. Somatic, verbal, neurophysiologic, medication, drugs, relational, experiential, narrative, video, and all therapies that are identified alphabetically identified (CBT, DBT, EMDR). With respect to all my colleagues, claims to the contrary about this or that therapy treating trauma are like the claims about snake oil: "step right up folks, the elixir will cure everything." Whether or not you accept the concept of multiple psychobiological processes making meaning, you must admit that the trauma is complicated and simple solutions, quick solutions will not be adequate. This is not a call for a kind of eclecticism, though eclecticism can be helpful. The frame is meaning making and our understanding of it. The challenge of a multiple method therapeutic approach is to initially figure out what is the neurosomatic form of the trauma and to specify a therapeutic approach that gets at the form, to track the dynamics of the change induced and the new neurosomatic form of the trauma, to figure out the next approach that will gain traction, and so on in an *ongoing* process. In some cases, multiple forms of therapy may be used simultaneously. To get at this multiple approach we need far more research and a change in training away from a one size fits all approach to a multiple-competence approach, and/or a team approach to therapy and/or one that considers the whole range of experience and functioning of the individual. At the core, the challenge is to figure out what to do, when to do it, and when to change.

Adults and children live in a world where an hour of any kind of therapy is lost in the welter of all the other hours. If the people in the child's life are not part of the process of change, then change will not occur; the same is likely true for adults. Traumatized children face the same dilution, even with weekly hours in therapy. They need an immersion with therapeutic Others. Adults, at some point, may be able to do much work on their own, but additional scaffolding of their self-organized work with more contact (sessions) and "work" will enhance their work. Thus, what makes sense for us as a guide for therapy – for children and adults – is to take our cue from the development of

meaning: Approach therapeutic change like learning peek-a-boo. Do it often, do it in multiple ways that fully engage every level of the individual, and let the individual agenically control the process.

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