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A Heaven in a Wild Flower: Self, Dissociation, and Treatment in the Context of the Neurobiological Core Self

Diana Fosha, Ph.D.

At the heart of this article are current understandings from the cutting edge of neurobiology on the neurobiological core self. A clinical understanding of self, dissociation, and therapeutic process is shaped by: (a) current affective neuroscience work on the neurobiological core self; (b) longitudinal developmental research on attachment patterns and dissociation; and (c) neurobiological research on how dissociation affects the brain. I explore how the fundamentally coherent nature of the neurobiological core self relates to self as clinically conceived. With a clinical method based on the moment-to-moment tracking of the phenomenological manifestations of affective experience, I focus on moments that possess qualities of integrative *experience*, i.e., moments possessed of coherence, vitality, energy and/or subjective truth: I propose that such moments of experience are manifestations of the fundamentally integrative neurobiological core self in fractal form. Attending to them all the while being immersed in the fragmented world of dissociative experience is important: they contain resources to be recruited for the trauma and neglect work ahead. Thus equipped, dissociation and its impact on self, and then its treatment, can be considered. I conclude with some snapshots from clinical work with a patient manifesting dissociation as neurobiologically defined here. The mechanism of recognition is shown to play a major role in the search-and-rescue mission for and of the patient's felt sense of self.

Ignoring the origins of things is always a risky matter. [Edelman, 1992, p. 33]

The human being's *being-open to being* is so fundamental and decisive in being human that, due to its inconspicuousness and plainness, one can continuously overlook it in favor of contrived psychological theories. [Heidegger, 2001, p. 74; italics added]

In the development of every individual, the mind has a root, perhaps its most important root, in the need of the individual, at the core of the self, for a perfect environment. [Winnicott, 1949, p. 246]

The process, gradual or sudden, by which a self, hitherto divided . . . becomes unified. [James, 1902, p. 171]

Your love for me has got to be real for you to know just how I feel. [Holly, 1957/1964]

“The nature of the self has been one of the central problems in philosophy and more recently in neuroscience” (Janksepp and Northoff, 2008, p. 193). This is how Jaak Panksepp, developer of *affective neuroscience* (1998), begins his 2008 paper with George Northoff. More than a century

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earlier, William James (1902, p. 171) wrote of the *de facto* healing of the dissociation of “a self, hitherto divided” reflected in a once again “unified” self.

I wish to make explicit the conceptual framework for the discussion ahead. Rather than coming from a focus on pathology, I contact dissociation from the vantage point of healing. For, in response to the tragedies that recruit dissociation as a coping mechanism, with deadness and depletion as the price for survival, one also encounters bursts of aliveness and manifestations of the energy of healing. And alongside the divide-and-conquer strategies of dissociation, fundamentally integrative transformational procedures and processes (Fosha, 2000; 2005; 2009a; Lamagna and Gleiser, 2007; Gleiser, Ford, and Fosha, 2008; Fosha et al., 2009; Lamagna, 2011) wait at the ready.

Transformance (Fosha, 2008, 2009a) is my term for the overarching motivational force that pulses within us, entraining the innate dispositional tendencies for healing¹ and self-righting that are wired deep within our brains (Doidge, 2007; Emde, 1983; Ghent, 1990; Sander, 2002; Siegel, 2009). The motivational thrust of transformance is toward maximal growth, vitality, energy, integration, and authenticity. The expansive strivings of transformance, when actualized, underlie resilience and flourishing (Fosha, 2009a, b; Fredrickson and Losada, 2005) and represent adult neuroplasticity in action (Doidge, 2007; Fosha, in press; Siegel, 2010). Transformance is one aspect of a larger project of developing a therapeutic metapsychology that is change-based, rather than psychopathology-based (Fosha, 2003, 2005, 2009a, b). Understanding how healing transformational processes work and how they can be effectively used in a treatment that engages the emotional suffering of dissociation is central to such an endeavor.

Transformance and the drive toward healing and self-righting are expressed and put into action through the transformational process,² which is available to be activated from the get-go in any therapy. The alchemy of the transformational process turns emotional suffering into resilience and wellbeing: first, through accessing and processing emotional experience to completion, and then, through *metaprocessing* the emergent transformational experience (Fosha, 2000, 2003, 2005, 2008, 2009a, b). The culmination of the transformational process is a deeply integrative state, *core state* (Fosha, 2000, 2005): clarity, ease, flow, compassion, generosity, self-compassion, creativity are its emergent and defining qualities.³

Centrally relevant to the thesis of this article, I note that another central feature of core state is the individual’s *felt sense*⁴ of her or his core self. I refer to this as the *felt core self*. At moments of *felt core self* experiencing, the individual has a sense that “this is me.” Such experiences are accompanied by a strong subjective sense of truth. And, indeed, as I discuss in the following, the

¹There is considerable empirical evidence, particularly from the growing neuroscientific evidence of plasticity in adult brains, for these foundational assumptions. Presenting that evidence is beyond the scope of this article. The interested reader is referred to Bushell, Olivo, and Theise (2009), Doidge (2007), Fosha (2009b), and Siegel (2009, 2010), among many works on the topic.

²The transformational process can be thought of—to use a current colloquialism—as growth on steroids.

³Schwartz (1995), writing on the qualities of core self or core self energy, and Siegel (2009, 2010) on the *features of integration* arrived at a similar phenomenological description. Which is good, as it validates fundamental aspects of phenomena that come through even when being viewed through different theoretical lenses.

⁴Now widely used, the *felt sense* is Gendlin’s term (1996): “a bodily sense of some situation, problem, or aspect of one’s life. . . . [A] felt sense must first be allowed to come; it is not already there. A felt sense is new. . . . It *comes* freshly, in something like tearfulness or yawning *come* in on us” (p. 20; italics in original text).

truth sense—as a felt sense experience—is the affective/aesthetic marker of core state (see also Grotstein, 2004).

However, much as transformation is fervently desired, it is also frightening, for it challenges established identity. This is where recognition processes come in. Recognition is the paradoxical process by which one responds to new experiences with a sense of familiarity: In recognition, one feels that one is re-encountering what is actually happening for the first time. Like Yogi Berra, said “It’s *déjà vu* all over again.” If transformation involves the accommodation of self in response to the challenges that evoke emotion, recognition is how new experiences, the fruits of the transformational process, become assimilated into self (Fosha, 2009a).

The self heals, grows, and reorganizes through the dialectic of transformation and recognition. And similarly, the expansive, progressive forces of transference always coexist in the psyche in balance with the constrictive, conservative forces of resistance. Transference and resistance each lead to a characteristic self-organization, i.e., different ways in which affect regulation, memory, perception, self, other, and self–other interactions are organized. The ratio of safety to threat in the patient’s environment determines which motivational force and respective self-organization is dominant at a given moment.

A survival-based self-organization, the *compromised self* (in the past called the *self-at-worst*; Fosha, 2000), comes to the fore under conditions of threat and stress: it is how psychopathology is organized. On the other hand, when safety prevails, the *resilient self*, a transference-dominated self-organization (previously called *self-at-best*; Fosha, 2000), comes online. The conservative motivational strivings of resistance consume and drain psychic energy, and result in stuckness and stagnation. In contradistinction, a felt sense of vitality and energy characterizes transference-based emergent phenomena. Clinically being on the look-out for transference-based phenomena marked by vitality and energy, to recruit their resources for therapeutic work with aspects of the compromised self is a core principle of the clinical approach to the treatment of dissociation discussed here.

This article considers how a clinical understanding of self, dissociation, and therapeutic process is shaped by (a) current affective neuroscience work on the neurobiological core self (Damasio, 1999, 2010; Northoff and Panksepp, 2008; Panksepp and Northoff, 2008), (b) longitudinal developmental research on attachment patterns and dissociation (Lyons–Ruth, 2003, 2006; Ogawa et al., 1997; Dutra, Bianchi, et al., 2009; Dutra, Bureau, et al., 2009), and (c) neurobiological research on how dissociation affects the brain (Bluhm et al., 2009; Lanius, Bluhm, et al., 2006; Lanius, Vermetten, et al., 2010; Lanius, Bluhm, and Frewen, 2011). I explore how the fundamentally coherent nature of the neurobiological core self relates to self as clinically conceived (Frederickson, 2003; Faranda, 2009). With a clinical method based on the moment-to-moment tracking of the phenomenological manifestations of affective experience, I focus on moments that possess qualities of integrative experience, i.e., moments possessed of coherence, vitality, energy and/or subjective truth: I propose that such moments of experience are manifestations of the fundamentally integrative neurobiological core self in fractal form. Attending to them, all the while being immersed in the fragmented world of dissociative experience is important: They contain resources to be recruited for the trauma and neglect work ahead. Thus equipped, both in this article and in treatment, dissociation and its impact on self, and then its treatment, can be considered. I conclude with some snapshots from clinical work with a patient manifesting dissociation, as neurobiologically defined here. The mechanism of recognition is shown to play a major role in the search-and-rescue mission for and of the patient’s felt sense of self.

THE NEUROBIOLOGICAL CORE SELF

The core-SELF, i.e., the respective neural networks, provides primordial neural correlates that represent organisms as living creatures. [Panksepp and Northoff, 2008; use of capitals in original]

The True Self comes from the aliveness of the body tissues and the working of the body functions, including the heart's action and breathing. . . . [It is] at the beginning, essentially not reactive to external stimuli, but primary. . . . (The True Self) collect[s] together the details of the experience of aliveness . . . [and is] the summation of sensori-motor aliveness. [Winnicott, 1960, p. 148–149]

[The core self is] a dynamic collection of integrated neural processes, centered on the representation of the living body, that finds expression in a dynamic collection of integrated mental processes. [Damasio, 2010, p. 9]

Current neurobiology says that the *core self*—the very term used by the premier neurobiologists of our time, Antonio Damasio and Jaak Panksepp, to refer to the collection of subcortical midline structures of the brain dynamically working together in coordinated fashion—is wired in and there from the get-go. Operating as a foundational neurobiological organizer of function and experience, the core self is intrinsically integrative. Affective and somatic, deeply supported by and rooted in “the neural correlates that represent living creatures,” (Panksepp and Northoff, 2008, p. 203), the self is “a dynamic collection of integrated neural processes that finds expression in a dynamic collection of integrated mental processes” (Damasio, 2010, p. 9). Located deep and center in the brain, the core self is automatic, affective, and action-based. As elaborated in the work of Damasio (1999, 2010) and Panksepp (1998; Northoff and Panksepp, 2008; Panksepp and Northoff, 2008), *the core self* has coherence, self-related values, drive, and direction. Neither a construction nor an achievement, integration is an inherent intrinsic quality of core self.⁵

The coordinated functioning of subcortical midline structures in conjunction with cortical midline structures is what constitutes the *neurobiological self*: With the periaqueductal gray at the relay center, massive interconnections link upper brainstem regions to higher medial regions of the frontal and prefrontal cortices, and vice-versa. What results from this bidirectional coordination of subcortical and cortical midline structures is manifested through integrated affective/cognitive processes that give rise to identity, agency, ownership of experience, and behavioral coherence.

a. Through the Lens of Self: Self-Related Processing Activities and the Role of Recognition in the Self-Based Valuation of Stimuli

The neural networks that constitute the core self represent the organism as a living creature. This representation has specificity: what is represented is not a generic living creature, but rather *this* particular individual living creature.

⁵*N.B.* A note on usage: In this section, and throughout, in keeping with Panksepp and Damasio's convention, the term *neurobiological core self* refers to the self-organization mediated by subcortical midline structures of the brain, and the term *neurobiological self* refers to the self-organization mediated by a coordination of subcortical and cortical midline structures. Given my focus on affectively and bodily rooted aspects of experience, in this article I privilege the *neurobiological core self* usage.

Self related processing refers to a mode of interaction between the self and the environment, supported by the neural networks that constitute the core self.

The being-in-relation-to . . . characterizes the unfolding essence of the human being. [Heidegger, 2001, p. 153]

The core-self is a process through which we gain knowledge about ourselves and our environments. It is this emergent coordination of internality and externality, of a mind–body–world connection . . . which [enables us] . . . to become intentional and . . . empathic agents in the world. [Panksepp and Northoff, 2008, p. 11; italics added]

Damasio and Panksepp both make the point that the self’s activities are guided by self-related values, i.e., the values selectively accorded to environmental stimuli reflecting their salience to self—and those values being both unique to the individual and emergent. Recognition at this level is the automatic process that registers the *matching* between something in self and something out there deemed salient to self (Edelman, 1992).⁶ Vitality affects (Stern, 1985) are affective/energetic phenomena that denote the quality of the match between what self needs and what is happening: positive vitality affects (e.g., energy, a sense of things that feel right, calm, interest) mark a match; negative vitality affects (e.g., stress, tension, depletion, a sense that things feel off or wrong) signal the lack thereof.

The core self is not static: Dynamic and emergent, the self develops uniquely, i.e., it epigenetically unfolds, in relation to its specific environment over the course of a lifetime. Uniqueness is not an illusion reflecting human *hubris*: A unique path, the “emergent coordination of internality and externality,” is forged through the self’s interactions with “mind–body–world,” guided by recognition processes that view everything through the valuative lens of salience to self Panksepp and Northoff, 2008, p. 204).

b. Dopamine-Mediated Seeking: Drive, Direction, Reward

Drive and fuel for the self’s interactions with the mind–body–world comes from *seeking system*, the motivational aspect of the neurobiological core self, defined by Panksepp (2009, p. 9) as “the active ‘explorer’ inside the brain.” He went on to say, “This appetitive motivational system energizes the many engagements with the world as individuals seek goods from the environment as well as meaning from everyday occurrences of life. . . . [It is] a system that energizes our intentions in actions.” The seeking system is a dopamine-mediated system which is what drives self to engage life through self-related processing (Northoff and Panksepp, 2008; Panksepp and Northoff, 2008).

To exercise the seeking system and manifest core self through self-related processing is fundamentally pleasurable and rewarding, for dopamine-mediated experiences are pleasurable, and thus rewarding. The motivation to keep engaging in the activities so characterized is entrained. The qualities of pleasure and reward are essential features for processes that support neuroplasticity (Doidge, 2007; Siegel, 2010): Pursuits that are rewarding and pleasurable become recursive

⁶Edelman (1992) regarded the match between self and the world brokered by recognition processes as essential. This is how he defines recognition: “The continual adaptive matching or fitting of elements in one physical domain to novelty occurring in elements of another, more or less independent physical domain, a matching that occurs without prior instruction” (p. 74). He felt that “neurobiology is a science of recognition” (p. 79).

appetitive processes, where *more begets more* and thus the brain changes (B. L. Fredrickson, 2001, 2009; Ghent, 2002; Fosha, 2009a, b). Vitality and energy are the affective/somatic markers of such processes. Manifestations of seeking, in conjunction with the self-related valuation of stimuli, are to be found in experiences of agency, initiative, enthusiasm, and drive.

I have the intuition that one's feeling of a normal self as well as all the energetic-euphoric vitalities of our life are closely affiliated with the health of the SEEKING system. [Panksepp, 2012, personal communication, capitals in the original]

Dopamine is the fuel of the self's seeking. Like oxytocin, dopamine flows in conditions of low stress and threat (MacDonald, 2012, personal communication). In facilitating environments, i.e., in transference-based conditions, the seeking system of the neurobiological core self can come to the fore and epigenetically unfold. However, in affectively thwarting environments, where stress/threat are high, not regulated and thus cannot be rapidly metabolized (Schoore, 2009), the combo of oxytocin and dopamine is supplanted by the neurotransmitters of stress management.⁷

Thus, here is a summary of the neurobiological core self, with some referents of the construct: organization; behavioral coherence; viewing the world of stimuli (internal, external, proprioceptive, what have you) through the lens of self, i.e., self-related processing; and the seeking drive and its qualities of vitality, pleasure, and neural energy. At the higher levels of the whole neurobiological self, where there is a bidirectional coordination of subcortical and cortical mediation, one finds identity, ownership of experience, agency, initiative, and idiosyncratic and uniquely personal aspects of self and self-experience that experientially culminate in the felt sense of I.

QUALITIES OF THE NEUROBIOLOGICAL CORE SELF

The neurobiological core self it is more than an abstract construct. It has specific qualities that manifest in behavior, actions, and experiences, each identified by its respective tag. In the following section, I identify these qualities, along with their associated manifestations. Because of the holographic aspect of the neurobiological core self, even when only one aspect manifests without the others in experiential evidence, it suggests that more integration may be present and available for clinical work than appears to be the case. The tags alert us to this possibility.

- i. *The tag of coherence*: Given the fundamentally integrative nature of the core self, I refer to experiences that evidence organization, coherence, structure, and identity and/or ownership of experience as bearing the tag of coherence.
- ii. *The tag of seeking*: Referencing the dopamine seeking system, I refer to experiences that evidence drive, purposiveness, direction, and are sometimes marked by pleasure and vitality, as bearing the tag of seeking.
- iii. *The tag of recognition: the click of recognition*. Self-related processing uses the experience of recognition (Edelman, 1992; Fosha, 2009a) to evaluate stimuli by their salience, or lack

⁷Although dopamine and cortisol (the HPA axis) are inversely related, oxytocin and dopamine are congruent and positively correlated (MacDonald, 2012, personal communication).

thereof, to self. The recognition process, a highly precise mechanism, determines that there is a match (or not) between self and stimulus (Edelman, 1992; Fosha, 2009a; Sander, 1995). When the match is exact, there is a little explosion of positive affect, vitality, and energy, which is experienced as a click of recognition or a gut level yes (Grotstein, 2002). I refer to experiences that reflect that click of recognition as evidencing the tag of recognition.

- iv. *The tag of aliveness, vitality and/or energy.* Affective/somatic markers of integrative experiences are marked by aliveness, vitality, and energy. Moment-to-moment, these affective/somatic glimmers signal to self and other the sense that things are on track, feel right for self, and are going in a direction that serves the particular organismic process they mark. Their phenomenology is invariably affectively positive, vitalizing, and energizing. In using the term *positive*, I do not mean necessarily happy, rather experiences that “feel right.”⁸ Sometimes one sees these glimmers of aliveness, although one might not know what they mark, be it self or dissociated emotion. They are powerful heralds that some integrated experience is lurking somewhere and thus well worth clinical attention. I refer to such glimmers as being marked by the tag of aliveness, vitality, and/or energy.

THE EXPERIENTIAL CORE SELF AND THE FELT SENSE

The Felt Core Self

Deeply felt moments of personal truth, vitality, energy, agency, and coherence from a self-related perspective spontaneously emerge at meaningful moments of existence; they are also a feature of core state, the state of calm and integration that is the culmination of the transformational process. Deeply pleasurable—again pleasurable not in the sense of happy, but in the sense of feeling deeply right and true—at these moments, the individual has a sense that “this is me.” Metaprocessing the experience of such moments leads to further unfolding: both the felt sense of *I* and the “this is me” experience deepen, consolidate, and becomes more textured. This is the *felt core self*: it is as close as we get to an instantiation of the neurobiological core self in actual experience.

If the self that is evident at moments of resilient self-living is the diamond in the rough, the self that emerges in moments of core state experiencing, the *felt core self*, is a brilliant crystalline diamond, all facets sparkling, clean, and sharp. Such moments allow one to directly witness, experience, and thus grasp the essence of core self through its phenomena and experiential manifestations (see also Faranda, 2009; J. Frederickson, 2003).

There is something in such moments that is orienting, organizing, and transformational. A paradigm shift (Kuhn, 1970) takes place: There is a reorganization of self based on *felt core self experiencing*, which affects self in both feed-forward and feed-back mechanisms. There is a reinterpretation of everything in light of the new experience: It is this new self, so to speak, that will now define the lens through which self-related processing will proceed from this point forward, including how the past is viewed. (Nadel and Moscovitch, 1997).

⁸The phenomenology of things that do not feel right, and instead feel wrong or off, is discomfort, stress, or other manifestations of fundamentally negative somatic/affective markers.

The truth sense that accompanies the experience of *felt core self* experience is a crucial aspect of such experiences. Although, indeed, there is no such thing as The Truth, there is such a thing as the *experience of truth* in the moment. The truth sense goes with the sense of knowing as the 7th sense (Grotstein, 2004): this is a knowing that comes from deep inside and is not in the head, or cognitive: It is something we sense, same as the other senses.⁹ It is this knowing that allows the patient to say, “Yes! That’s it” when recognizing the personal truth of an experience.

There are three aspects of the hologram that characterize *the felt core self* experience that emerges in core state, all positive affective/somatic experiences: i. coherence and cohesiveness; ii. vitality and energy; iii. a subjective sense of truth. All three aspects are in integrated evidence at moments of core self experience.

The Felt Sense

The felt sense (Gendlin, 1996) is crucial to what follows in this article, for it is how neurobiological processes manifest in the experience that is the stuff of clinical work. It is an ever-changing flowing sense, seamlessly operating moment-to-moment. When therapists focus their, and their patients’, attention at a given moment, that moment is taken out of the flow of experience: They switch from a horizontal flow across time, to a vertical depth exploration of what emerges when they thus bring their focus to a particular moment of experience.

To capture the integration that goes into creating the *felt sense*, Bud Craig, a neuroanatomist specializing in the insula and its companion, the anterior cingulate, coined the acronym GEM for a “global emotional moment:” a GEM is “a coherent representation of all feelings at one moment . . . the neural self at each moment in time” (Craig, 2010, p. 509). The insula, interconnected with the midline structures that constitute the neurobiological self, is where the *felt sense* of experiences is mediated (Craig, 2005, 2010; MacDonald, 2010; Siegel, 2010; Fosha, *in press*).

GLIMMERS OF INTEGRATED SELF EXPERIENCE: GEMS AND FRACTALS

To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour. (Blake, 1863, p. 66)

GEMs and Fractals.

Even a fleeting moment when the clouds part to reveal a gorgeous landscape can be revelatory. If mindfulness is brought to one of these moments, it becomes a GEM of integrated self-experience. Even when the cloud cover reconstitutes, that glimpse of the whole thing is very powerful and becomes a guide for seeking to recover it: It is a fractal, the small detail of

⁹My thanks to David Mars and Karen Pando-Mars for many stimulating and inspiring discussions on their notion of Arnold Mindell’s seven channels of experience (emotion, energy, name the others) and what it means for knowing or truth to be an eighth channel of experience.

experience containing the totality of the whole self. GEMs include moments of healing (little or big shifts for the better), moments of recognition, moments of being moved, and moments of experiencing the truth of one's experience, even if for an instant.

The GEMs and fractals of self represent a way of grasping the totality of integrated experience through the vehicle of a portion of it, a portion that, nonetheless, is faithful to the gestalt and feel of the whole thing (Levenson, 1975). Whether brief or characterizing longer periods of time, they occur under the aegis of the transformance-based resilient self. They also arise serendipitously and spontaneously in the course of clinical work: Often off script, they can show up, for instance, in the casual conversations that precede the session proper. This also applies par excellence to visceral preferences, likes, dislikes, and choices, e.g., preferred temperatures, particular foods, aesthetic tastes, etc., i.e., reflections of the neurobiological core self's self-based valuation of stimuli in action. These preferences sneak under the dissociative radar as behavioral manifestations of an integrated, agentic self.

Thus, one finds that the neurobiological self has experiential aspects. Its distinct qualities are found in processes and phenomena that bear the tag of coherence; the tag of seeking; the tag of recognition; and/or the tag of aliveness, vitality, and energy. We also have GEMs of integrated self, moments of aliveness, emotion, and integration that are evident even amidst dissociation. All these qualities and moments and experiences have in the phenomenological and/or experiential forefront one set of features or another. Some are in the forefront; some are in the background; some are more explicit; some are more implicit. But they are all integrated aspects of the hologram (Levenson, 1975) that is the core self. And, as I hope to demonstrate, in the phenomenology of the particles of core self one finds powerful tools that can be used in the process of minimizing the fragmenting impact of dissociation and restoring the fundamentally integrative nature of the core self. On the way, these particles represent important resources of much needed coherence, vitality, energy, and meaning.

DISSOCIATION, NEUROBIOLOGICALLY DEFINED¹⁰

Dissociation refers to a wide range of alterations in the normally integrative functions of identity, memory, or consciousness, including trance states, depersonalization, derealization, amnesia, and dissociative identity disorder. [Dutra, Bureau, et al., 2009, p. 386]

The other way of constructing feeling states consists of altering the transmission of body signals to the brain. . . . We know that in situations of fear in which the brain chooses the running option rather than freezing, the brain stem disengages part of the pain-transmission circuitry—a bit like pulling the phone plug. The periaqueductal gray, which controls these responses,¹¹ can also command the secretion of natural opioids and achieve precisely what taking an analgesic would achieve: elimination of pain signals. In the strict sense, we are dealing here with a hallucination of the body because what the brain registers in its maps and what the conscious mind feels do not correspond to the reality that might be perceived. [Damasio, 2010, p. 121]

¹⁰A comprehensive review of neurobiological research on dissociation is beyond the scope of this article. I selected a vein of studies that is congruent with this article's focus on the neurobiological core self.

¹¹The *periaqueductal gray* is a central part of the subcortical midline structures that constitute the core self (Panksepp and Northoff, 2008).

Dissociation occurs against the background of a fundamentally coherent and integrative neurobiological core self. Environmental stresses and overwhelming emotional experiences are too much for the available resources of the self: The result is the discoordination and integrative failures that constitute dissociation. Dissociation represents a way of responding to overwhelming experience with a strategy of detachment and disconnection. In neurobiological language, dissociation represents the top down, cortical inhibition, manifested in the overmodulation of limbic function, such that there is a decreased connectivity with emotional (e.g., amygdala-mediated and right-brain mediated) and somatic (e.g., insula-mediated) experience (Bluhm et al., 2009; Lanius, Bluhm, et al., 2006; Lanius, Vermetten, et al., 2010; Lanius, Bluhm, and Frewen, 2011).

This is how Ruth Lanius and her colleagues described dissociation: “The dissociative subtype of PTSD is described as a form of emotion dysregulation that involves emotional overmodulation mediated by *midline prefrontal* inhibition of the . . . limbic regions” (Lanius, Vermetten, et al., 2010, p. 640, italics mine). Faced with trauma-based stimuli, the PTSD subjects in question, i.e., 30% of Lanius’s PTSD sample, had a purely dissociative response, i.e., with no evidence of hyperarousal. It “predominantly involved subjective states of depersonalization and derealization *with no significant concomitant increase in heart rate*” (Lanius, Bluhm, et al., 2006, p. 718, emphasis added). Noteworthy are distinguishing characteristics in the connectivity of the default network of dissociative patients. The default network links the brain structures that are active when the individual is at rest; it highly correlated with the network of midline structures that comprise the neurobiological core self. Compared to normal subjects, there is a decrease in the connectivity of the default network of dissociative patients with emotional and somatic channels (i.e., the right hemisphere, insula, amygdala and hippocampus, all brain structures involved in affect regulation and affectively based communication); and there is an increased connectivity with cognitive channels.

I now consider what these findings might tell about the neurobiological core self in dissociation. One needs to remember that, in optimal conditions, core self-related processing operates automatically, is deeply affective, and is developmentally and epigenetically connected to sensorimotor and higher cognitive abilities.

What’s Inhibited by the Dissociative Response?

In optimal conditions, the core self¹² is intimately and bidirectionally connected with the insula to mediate the felt sense of the bodily experience characteristic of different affective and emotional states and to the amygdala and hippocampus to mediate self-related processing in conditions of threat. When that connectivity is disrupted, as it appears to be in dissociative patients, the experiential felt sense of the body, and the connection with fearful arousal in threat-based situations,

¹²It is interesting to note that, although a primordial sense of the body probably residing in the upper brain stem (Damasio, 2010; Panksepp and Northoff, 2008) is always informing the self-related processing of the core self, the structures that constitute core self do not include the insula, which is crucial to proprioception and the mediation of many other aspects of emotional experience, including the energy management aspect of emotional experiences (Craig, 2005, 2010); nor do they include the amygdala and the hippocampus, crucial structures for the generation and mediation of emotion, especially fear (Damasio, 2010; LeDoux, 1996).

are often inhibited. Thus, the clinical picture of dissociation reveals a predominance of detachment and disconnection from bodily emotional experience, with occasional bouts of dysregulated emotion, unmodulated and uninformed by self and its self-related processes.

What's There and Not Inhibited in Dissociation?

What's present and not inhibited is the activity of the cortical midline structures, especially those of the prefrontal cortex, i.e., the higher aspects of the neurobiological self. As a rule, they play an important part in the emotion modulation that is characteristic of resilient individuals (Lanius, Vermetten, et al., 2010). That top-down control is significantly heightened for those relying on dissociation exclusively as a strategy of control at the expense of access to the biologically salient information residing in the emotions, called "the ancestral tools of survival" by Panksepp (2009, p. 1) and the "beacons of truth" by Grotstein (2004, p. 1081). However expedient in the moment, the cost of the dissociative solution is great. And yet, at the same time, in line with the argument of this article, its advantages remain strong if survival is at stake. Somatic and emotional disconnection are the price paid for maintaining the coherence of the self.

THWARTING ENVIRONMENTS SINGULARLY SALIENT TO THE DEVELOPMENT OF DISSOCIATION

In contrast to a more discrete traumatic event, the child's fear of remaining unseen and unheard by his caregiver, resulting in unmet needs, is worked into the fabric of identity from a very early age. [Dutra, Bianchi, et al., 2009, p. 91]

Dissociation can be construed "as a way of mentally accommodating to intense social pressures not to acknowledge pain and distress within a set of caregiving relationships that are vital for survival. The attachment relational context imbues both the caregiving transactions and their internalized mental representations with the intense emotional valences characteristic of defensive responses. This valence does not come simply from an intrapsychic need not to know, but also from a relational communication not to speak." [Dutra, Bureau, et al., 2009, p. 88]

Much as the equation of 'trauma → dissociation' is, at this point in the history of the field, taken as a given, a more textured picture of what constitutes the trauma that leads specifically to dissociation (narrowly defined as previously described) emerges from longitudinal developmental research into what aspects of the child–parent relationship impact adult functioning (Lyons-Ruth, 2003; Ogawa et al., 1997; Dutra, Bianchi, et al., 2009; Dutra, Bureau, 2009). From different research teams working with different nonoverlapping longitudinal samples come the surprising findings that the biggest contributors to dissociation and dissociative manifestations at age 19 are neither "big T trauma" nor parental hostility, but rather the "quieter" (Lyons-Ruth, 2003, p. 903) caregiving failures: emotional unresponsiveness, flatness of affect, and psychological unavailability in childhood. The only aspect of abuse that appears to correlate with dissociation is verbal abuse (Teicher, Samson, and Polcari, 2006; Dutra, Bianchi, et al., 2009), which is a caregiver attack on the self of the young child. Again, surprisingly, in Ogawa's research (Ogawa et al., 1997), occurrence of prospectively assessed physical or sexual abuse during childhood was not associated with dissociation scores. Instead, the psychological unavailability of the caregiver was

the single strongest predictor of dissociation at age 19. Within quality of early care, the following were highly associated with dissociation in later life (age 19): disrupted communication in the lab, mother's (lack of) positive affective involvement at home, and mother's flatness of affect at home. These continued to predict dissociation, even after controlling for *big-T* trauma. "What is notable about these type of maternal interactions is that they all serve to subtly override or ignore the infant's needs and attachment signals, but without overt hostility" (Dutra, Bianchi, et al., 2009, p. 87).

Emotional unresponsiveness, flatness of affect, and psychological unavailability *de facto* translate for the child into a fundamental aloneness in the face of overwhelming emotions. Aloneness in the face of overwhelming emotions "in particular, the early lack of a caregiver to whom one can communicate one's distress and discomfort and elicit a soothing response appears to heighten the risk for dissociation later in life" (Lyons-Ruth, 2003, p. 885). The hypothesis that emerges is that a parent-child affective dialogue that repeatedly signals the parent's reluctance or refusal to respond to infant fear or distress shapes the child's corresponding mental organization. The result of this may be that a part of the child's mind corresponding to the parental stance cannot be responsive to, or aware of, another part of the child's mind that contains the distressed and frightened experience (Lyons-Ruth, 2003, 2006).

Parental affective unresponsiveness can be conceptualized from a psychobiological viewpoint as a form of 'hidden trauma' specific to infancy—trauma that has the potential to hyperactivate the infant's responses to stressors over time. Such heightened vulnerability to stressors, in combination with an implicit injunction from very early in life not to bring one's fear and distress to the caregiver for comfort and soothing, may then shape the "choice" of dissociation as one of the few available means for achieving a modicum of relief from fearful arousal. [Lyons-Ruth, 2003, p. 887]

The implications of these findings for therapeutic presence, stance, and action are pretty unequivocal: undo aloneness; be psychologically available, emotionally responsive, and engaged; help; and entrain recognition mechanisms to promote the patient's receptive affective experience of being seen and heard.

CLINICAL MANIFESTATIONS OF DISSOCIATION: FUNCTION, PHENOMENOLOGY, AND FELT SENSE

Trauma-related structural dissociation . . . is a deficiency in the cohesiveness and flexibility of the personality structure . . . which means that there is a lack of cohesion and coordination among these systems that comprise the survivor's personality. [van der Hart, Nijenhuis, and Steele, 2006, p. 4]

He stayed, watching the two creatures that struggled in the one body like two moon-gleamed shapes. [Faulkner, 1936, p. 260]

Dissociation is a reflection of the self working to prevent damage to, and/or wounding of, the core self (van der Hart et al., 2006). A manifestation of organismic wisdom, it is based on a recognition of what's important in the context of what's real: aliveness, vitality, truth. But if

resources¹³ are not available or cannot be had, the self's survival trumps all else: All that which is vulnerable and/or overwhelming is exiled (Schwartz, 1995). The organism survives, albeit its functioning compromised. Dissociation is affect-regulation in action, in the context of what the individual can and cannot regulate (Lamagna and Gleiser, 2007; Fosha et al., 2009; Gleiser et al., 2008; Lamagna, 2011).

In neurobiological language, dissociation is maintained through the top-down cortical "over-modulation" of the limbic system (Lanius, Vermetten, et al., 2010, p. 641). In dynamic and affective language, the dissociation is maintained by *defensive exclusion* (Bowlby's, 1980, term): Whatever threatens the integrity of the self and/or of the primary attachment relationship, becomes defensively excluded. In addition, what Winnicott (1960) called the True Self is also kept offline, although for a different reason: Here the dissociative exclusion is powered by a wish to protect the very contents that are being dissociated; the true self is being kept in hiding to limit its exposure to toxic conditions and to protect its tenderness from the onslaught of neglect, or attack.

Fear, shame, and neglect are key culprits in the engendering and maintenance of dissociation. The compromised self is doing its best, but its best, given its limited resources, reflects what it learned from its attachment figures. The solution bespeaks the problem: The internalization of the very conditions that produce dissociation is what the dissociative strategy recreates in the internal environment (Lyons-Ruth, 2003, 2006; Lamagna and Gleiser, 2007; Lamagna, 2011). The parent, not wanting to know what is distressing the child, is internalized in the compromised self: The functional parts of the self *de facto* exclude emotion, vulnerability, and attachment needs. The aspects of self that contain those experiences are relegated to suffer alone.

Fear, both fearful arousal and the fear associated with "unwilled and unwanted aloneness in the face of overwhelming emotions" (Fosha, 2009a, p. 182) keeps the emotions excluded. Also operating here is Winnicott's formulation of the *anxieties* (1962), later reformulated as the *primitive agonies* (1974): If the experiences maintained by the dissociation were to come online, the self would breakdown. Shame strongly maintains the dissociative split. It does so when conceived of as an emotion, with its evolutionarily adaptive shrinking/constriction action to reduce the area of exposure; and it does so when conceived of as a neurobiological mechanism involving autonomic nervous system mediated shut down (Porges, 2009;¹⁴ Schore, 2009).

Neglect shows up to contribute to the dissociative picture in two ways: Emotionally, the inattention, indifference, disinterest, and noninvolvement of the caregiver map onto the self as shaming unworthiness, and fuel the exclusion of those aspects of the self. "I am not good enough," i.e., "I am unworthy of my parent's attention, care, involvement," thus I am defective, flawed, stupid, bad." Furthermore, neglect, by depriving the child of developmentally needed experiences of mirroring and intersubjective relatedness, thwarts development. Absent interactive mirroring, delight, and feedback, these unreflected aspects of the self remain unformed, unstructured areas of self-experience.

¹³I include internal resources in my notion of resources. I use *resources* to refer both to environmental factors, i.e., the relational environment, and capacities that buttress and scaffold experiencing.

¹⁴Under conditions of life threat, a dorsal vagal shut down, i.e., the autonomic nervous system shifting to functioning dominated by the dorsal vagal branch of the parasympathetic nervous system, underlies dissociation (Porges, 2009).

The effects of dissociation on the compromised self¹⁵ result in a division between what's online and manifest (and cortically mediated) and what's offline and excluded (and subcortically- and right-brain mediated). There is a Faustian bargain where what's available is either coherence or some aliveness/vitality/energy, but not both. What is missing is the alive, vital and coherent felt sense of the *I*: The integrated, agentic experience of the *felt self* is not to be had, for, after all, this is the realm of dissociation.

The self, the whole self and nothing but the self requires not only coherence and vitality, but also the subjective sense of the truth, the whole truth, and nothing but the truth. That sense of truth—an essential aspect of the felt core self and the affective/aesthetic marker of core state—can only obtain when there is a relatively unhampered access to the self's experience. That experience of truth can only emerge as a property of the bidirectional flow between here-and-now and there-and-then, between body and mind, between affect and cognition, between self and other. When too much of the self is dissociated, i.e., experientially offline, there are too many lacunae, too many gaps for there to be a cohesive and coherent integrated autobiographical story of *I*.

Nevertheless, even in the phenomenology of the dissociated aspects of the compromised self, one finds tags of self, i.e., manifestations of particular aspects of the neurobiological core self. And occasionally, a GEM of integrated experience makes it under the dissociative radar. These markers and glimmers represent vital resources that are already online and can be immediately recruited in the treatment of dissociation.

THE PRODUCTS OF DISSOCIATION: ONLINE AND OFFLINE EXPERIENCES

In the following is a taxonomy of sorts. Dissociative strategies are reflected in both what's experientially online and offline.

What's Online

The first online part, *the functional self*, is a survival self. It bears the tag of coherence. Coherence and the qualities of organized cognition, reflecting the influence of the (higher cortical) prefrontal midline structures are prominent, with a deemphasis of the limbic aspects of experience. Informed by a strong sense of how things work, its functioning somewhat impersonal, the functional self has direction determined by adaptation and the reality principle (cf. Grotstein, 2004). Will power manifested through effort is present, rather than drive. "The gravedigger" was one patient's name for his functional self: A gravedigger always busy burying emotional aspects of experience is an apt experiential representation of the top down cortical inhibition of limbic mediated experience.

The felt sense of the functional self captures the absence of vitality and depletion of energetic resources. Experiences of feeling "numb," "dead," "on automatic," and "going through the

¹⁵There is certainly a division, separation, disassociation between the two self-organizations I am calling the *compromised self* and the resilient self. But the processes responsible for that division and separation are different than the definition of dissociation I am using here. N.B.: What I am referring to as the *compromised self* and the *resilient self* are functional self-organizations that come to the fore in conditions of relative threat and safety. The neurobiological self underlies both and is reflected in each.

motions” abound. The more extreme the dissociation, the greater the depletion and the greater the rigidity and inflexibility. At one extreme is the robotic, machine-like self, an adaptation machine. The less severe version at the other end of the continuum involves knowing as a cognitive sense located in the head (Winnicott, 1949), but not having the deeply felt sense of feeling. “I *know* she loves me, but I don’t *feel* loved.”

The functional self closely corresponds to what Winnicott’s (1960) false self. It is my contention that the false self is not so false, though it is devitalized. However emotionally restricted its functioning, the functional self still has the tag of coherence. In it one finds a manifestation of the intrinsically integrative neurobiological self with its behavioral coherence, adaptation to the reality principle, and its sometimes grim determination to keep it together. Although there may be numbness or inauthenticity, people feel identified with their online functional selves. As a patient said: “I may not trust much else, but I trust my mind. It’s all I have.” For better or worse, “this is me.” In a funny way, the functional self is actually more authentic than it feels: It is disconnected from vitality, which is why it doesn’t feel authentic, but it has a ton of tags of self in coherence and the goals that drive the self related processing through which the functional self engages the world.

The second online part is the *mindless vitality-seeking action self*, bearing the tag of seeking. “That deaf, dumb, and blind kid, Sure plays a mean pinball.”

He stands like a statue, becomes part of the machine
 Feeling all the bumpers, always playing clean.
 Plays by intuition, the digit counters fall
 That deaf, dumb, and blind kid, sure plays a mean pinball. [Townshend, 1969]

Here, is the opposite of the previous picture: What’s online is the motor system powered by the dopamine-mediated seeking system, manifested in action, drive, and singleness of purpose. There is no felt sense of self separate from the action: The action is the self-expression, through almost blind knowing, devoid of other consciousness. Describing this aspect of the self as mindless is not pejorative—it is descriptive: Whatever is meant by mindfulness is absent here. There is energy and it’s structured by the action, but no conscious sense of agency or initiative.

The purpose of the mindless vitality-seeking action self is to bring the aliveness and positive affects so depleted by the dissociation and so missing from the functional self back online. This is a binge mentality: At all costs, the individual needs a hit of dopamine to bring a bit of energy and vitality into the system, even if short-lived. The pursuit is defined by its end; resources are needed now and there are no cognitions related to the overall viability and long-term consequences of the strategies being employed. The action and its longer term consequences are decoupled. Whether conscious or not, articulated or not, these actions represent voting with one’s feet. What is online is seeking, drive, action. What is dissociated is mindfulness, agency, integration with reality.

If the functional self has cognition without drive, the mindless vitality-seeking action self has drive without cognition.

Offline Experiences

The excluded aspects of experience. What’s excluded, and thus offline as a result of the dissociation, is both that which is unwanted and that which must be protected. The dissociated experiences that represent limbic system and right-brain mediated experiences are rich

in resources that, nevertheless, cannot be integrated into the online functioning of the self. Excluded experiences are: *the emotions*, especially the emotions associated with trauma; areas of *vulnerable self-experience*; and areas of *unformed self-experience*.

Excluded emotional experience. Emotions hold the truth of one's reality (Grotstein, 2004; Panksepp, 2009) and are vital components of a flexible, whole, integrated self. Unless metabolized and regulated, emotions feel foreign, as external to the self as a "clap of thunder or a hit" (Winnicott, p. 1960, p. 141). Only through the regulation of emotions can the resources contained within them enhance adaptation, rather than drain energy from the system (Craig, 2005). And only through the regulation of emotion can the energy and the adaptive resources of the emotions be usable to fuel a coherent agentic self.

The force, vitality, and energy of the emotions when unprocessed are potentially overwhelming. Their exclusion via dissociation protects the integrity of the functional self from the onslaught of emotions. Being a lot to contend with is especially true of the emotions associated with traumatizing events, which often have a force that led Pierre Janet (1889) to describe them as the *vehement emotions*. This is the realm of classic trauma: the emotions are too much, too hard, and too hard to feel alone, and so experiential access to them gets denied. Emotions usually get put in a part or in parts, which are either younger and/or specific to the situations that evoked the overwhelming emotion, or emotion-specific, i.e., the angry part, the sad part. Further along the dissociative spectrum, there is a lot more splitting of the self, and many parts hold different emotions and functions, and with them, memories, ways of being, and precious capacities.

Although the subcortical midline structures that constitute the neurobiological core self are connected with the amygdala, the amygdala, itself, is not part of the neurobiological core self. Furthermore, in dissociation, the connectivity between the networks of the core self and the amygdala is compromised (Lanius, Bluhm, and Frewen, 2011). Until they are regulated, emotions do not have the tag of core self, and remain "not me" experiences (Sullivan, 1953), without a sense of ownership. That is why it is possible for dissociative patients to have emotional experiences in treatment that then get disowned. The therapist is deeply moved and hopeful about a crucial piece of work that takes place, only to have the patient say, "I wasn't here while that was going on" or have total amnesia for the experience.

Excluded vulnerable self-experience. Whereas the motivation for the exclusion of emotional experience is to protect the functional self from the onslaught of dysregulated emotions it is not equipped to handle, the motivation for the exclusion of vulnerable self-experience is to protect it. Vulnerable self-experience is being protected by being hidden. Positive vulnerability and tenderness are the *vulnerable self's* markers: The vulnerable self is too vulnerable and too bare to manifest in the stressful environment that the functional self operates in. It could not survive.

The vulnerable self bears both the tag of self, and the affective/somatic markers of vitality. It is, however, new and tremulous (Fosha, 2006), an untried-though-true self. Its vulnerability is due to its being new and unexercised. It is shy and young, not young as in immature or developmentally arrested, but young as in not-yet-ready-for-prime time as a result of not having sufficient dyadic holding, reflection or engagement.

This is a pure manifestation of Winnicott's (1960) true self: vulnerable, true, but needing the certainty of safety to manifest itself. Its expression can only occur in conditions of utmost

intersubjective kindness and sensitivity. It is the most sensitive part of the individual, what is sometimes referred to as the heart.

Unformed self-experience. Particularly in environments of neglect, indifference, and inattention (Dutra, Bianchi, et al., 2009; Dutra Bureau, et al., 2009b; Ogawa et al., 1997), one finds another aspect of offline self-experience. This is the inchoate, unformed experience of aspects of the self not yet reflected, not yet seen, in a context of unmet needs. Rather than a dynamic exclusion, this is the exclusion of experience that cannot be included because it is unformed. These are in-limbo experiences, yet to be declared. They have to be seen and interacted with to become. They need the organization and coherence that the other, the seer, brings to what needs to be seen (recognition). Subjective experiences of “I am not myself,” “I am not here,” feeling lost, or rudderless are its manifestations.

It is important to remember that the excluded want to be known and included. This applies to all three areas of excluded experience. There is force to their drive toward self-expression, as there is vitality and energy. They are where the juice of aliveness is. It seems fitting to end this subsection with an excerpt from this poem by W. H. Auden (1939):

but he would have us remember most of all
to be enthusiastic over the night,
.
.
.
because it needs our love. With large sad eyes
its delectable creatures look up and beg
us dumbly to ask them to follow:
they are exiles who long for the future” [Auden, 1939¹⁶, pp. 273–276]

ON THE OTHER SIDE OF THE DISSOCIATION: GLIMPSES OF THE RESILIENT SELF. WHAT SEEMS NEVERTHELESS TO BE THERE, SOMEWHAT, SOMETIMES.

Even with the most dissociative patients, the empathic entering into their experience of no access to self must exist side by side with the knowing that the neurobiological core self, and thus the fundamentally integrative core self, is always in operation. Glimmers that are afforded us for just moments—maybe rare, maybe not quite so rare—unguarded moments of peace and calm, petting a dog, eating ice-cream, watching a sunset, being in a sanctuary, listening to a favorite song, breathing in salty ocean air, laughing at an idiotic sitcom: These are stolen moments of integrated aliveness, precious resources that need to be in the attentional and experiential forefront first of the therapist’s selective attention, and then of the patient’s.

Aspects of what Winnicott (1960) called the false self and van der Hart et al. (2006) called the ANP (for the apparently normal personality), to me, are evidence of the transference-based, resilient self appearing in conditions of low threat. A fair amount of ordinary, not false and not just apparent, real life gets lived in circumscribed oases of low threat: People listen to Haydn or Lady Gaga, argue about baseball, feed their parakeet, write papers on dissociation,

¹⁶Thank you, Michael Geiss, for sharing this poem with me in precisely this context.

have uncompromising preferences for eating cold pizza for breakfast, and pursue kooky idiosyncratic interests. My hunch is that such somatically rooted embodied ordinary experiences that sneak under the dissociative radar get read by the brain as integrated experiences, similarly for moments of knowing. If mindfulness is brought to seeking, the drive of self-related processing is subjectively experienced as a sense of knowing that guides us. Such experiences have direction and selection, even when lacking articulateable content. “I just know that this is something I must do, though I don’t know why” is a way in which what can’t be articulated might be articulated. I believe that knowing is also what Bollas (1987) refers to as the *unthought known*.¹⁷

If one focused on all these phenomena that are integrated and lived—i.e., are not the contents of the dissociation—their vitality, truth, joy, calm, meaning, what have you, can be put to work to regulate the nervous system and bring energy, vitality, and coherence into the system. This is how to increase processing capacity, and with greater processing capacity more can be processed, and thus eventually integrated into the self (Winnicott, 1974; Eigen, 2004; van der Hart et al., 2006). These GEMs of integrated self-experience, when recruited in the service of the treatment of dissociation, and experientially worked with, are invaluable for bringing experientially online much-needed resources for the work of healing trauma and restoring the experience and felt sense of an integrated self.

TREATMENT

But therapy can make aliveness grow. What emerges is not an end to deadness, but a new and better movement between aliveness and deadness, a rhythm or oscillation. (The psyche cannot do away with its states, but it can grow to make more room for them.) [Eigen, 2004, p. xvi]

The goal is to simultaneously expand the area of integrated experiencing while enhancing the individual’s capacity for experience, for dissociation occurs when the individual’s resources are not up to metabolizing “the truth, the whole truth, and nothing but the truth” of what’s going on. As van der Hart et al. (2006, p. 11) expressed it, we have “an overall goal of raising integrative capacity,” while also “help[ing] patients raise their mental efficiency so that they can maximize their mental energy.”

The living of this vision—finding, creating, its realness—involves risks that require equipment to support them. The achievement Winnicott depicts is made possible by the evolution of psychosomatic equipment sufficient to support it, at least for moments and then across moments. One’s equipment may fail and leave one stranded in aliveness too much for the heart to bear. [Eigen, 2004, p. 86]

To my thinking, Eigen (and Winnicott) got it right: Developing the equipment to support responding to the risks and challenges of life while maintaining the aliveness of felt core self-experience, initially “at least for moments and then across moments” (Eigen, 2004, p. 86). And to

¹⁷By the way, Winnicott’s writing is, to my mind, informed by the sense of knowing, rather than thinking, which is what makes it feel true to the reader. It is as if he is articulating something that’s been all along as a truth waiting to be found. That’s actually true, although the apparatus—be it psychic/personal, clinical/technical, or theoretical—had to be developed to be able to articulate knowing into content possessed of the experience of truth.

do so in a way that human hearts can bear. In the most general terms, the therapeutic goal is threefold: increase mindfulness, deepen affective experience, and most important, undo aloneness. The individual's aloneness, unwilling and unwanted aloneness, in the face of overwhelming experience is what gives rise to dissociation. It is only when the patient's aloneness is undone that the need for dissociation diminishes and that more integrated experiencing can happen.

THE AIM OF THE STANCE: BEING PRESENT, REAL, LOVING AND UNDOING ALONENESS

In The Rolling Stones version of the Buddy Holly (1957) song *Not Fade Away*, Mick Jagger sings, "Your love for me has got to be real for you to know just how I feel." What that is a plea for is in distinct contradistinction to the flat affect and emotional unavailability that engender dissociation (Dutra, Bianchi, et al., 2009a; Dutra, Bureau, et al., 2009b). An equally apt phrase might also be "Your love for me has got to be real for *me* to know just how I feel," for it is that—the individual's capacity to feel and to know what he or she is feeling—that is the aim of the treatment of dissociation.

Deconstructing the song's "love" that "has got to be real," here are qualities and actions that counter dissociation and undo aloneness in the therapeutic setting: Be kind; be real; be present; be generous (Pizer, 2012); be with; foster positively toned interactions, and metabolize and repair stressful, negatively toned interactions (Schore, 2001); go *beyond mirroring* (Fosha, 2000); help; engage in dyadic affect regulation; behave in oxytocin engendering ways, making use of and regulating gaze and eye contact (MacDonald, 2012, personal communication); be tender, and own lapses with sincerity (Ferenczi, 1933); foster the patient's sense that he or she exists in your heart and mind (Fosha, 2000, adapted from Fonagy).

RECOGNITION MECHANISMS IN WORK WITH DISSOCIATION

Under conditions of stress that evoke fear and shame, dissociation tears the psyche. Yet at a figuratively deeper level, below the dissociation, if you will, an integrative self is pulsing, has always pulsed and will always be pulsing. It is evident in the coherence, organization and integration that is there even when it is not felt. It is not that the experience of being split/fragmented is not valid: it is. Nor is it that dissociation does not affect the organization and function of the brain: it does. It is just that the core self, generator of neurobiological coherence, is always there, even when somewhat compromised, as it is in dissociation. Its intrinsically integrative nature is a huge resource in the treatment of dissociation.

Recognition processes are ideally suited to make use of that intrinsically integrative nature of the neurobiological core self, for recognition itself is a process of grasping wholeness in one fell swoop. Recognition, specific and precise, occurs when there is "a moment of fittedness" (Sander, 2002, p. 19), and we feel it: reflecting the entraining of self-related processing (Panksepp & Northoff, 2008), when there is a "match" between something inside and something outside, a burst of energy and vitality obtains, and there is a quantum shift. The recognition of the self by the other, even before the self has access to core self, is the rapid road to the core self. "I see

you,” when met with the “click of recognition” by the self, enhances and deepens the reaches of the transformational process.

Previous work focused on entraining transformational processes (Fosha, 2003; Fosha et al., 2009; Gleiser et al., 2008), working to heal dissociation from the inside out. In the case below, emergent processes revealed a different path: the use of recognition, here initially the therapist’s recognition of the patient’s self, to heal dissociation from the outside in. The therapist’s grasping of the patient’s integrated whole self – manifested through the tags and GEMs of the core self, and through and the unguarded moments of core self living – helped undo the patient’s dissociation and helped her experience her “I.” With feeling seen, dissociation, and the need for it, lessen, and more and more felt self can come online.

RECOGNITION FROM THE OUTSIDE IN: “I SEE YOU,” SO NOW YOU CAN BEGIN TO SEE YOURSELF

“Two truths approach each other. One comes from inside, the other from outside, and where they meet we have a chance to catch sight of ourselves.” (Transtromer, 2006, p. 106).

“It is best to recruit [the seeking system] in every form of psychotherapy, for it is a generalized substrate for all other emotional processes, from the establishment of libidinal bonds to seeking safety in dangerous situations” (Panksepp, 2009, p. 10).

Every now and then a patient comes along for whom a particular aspect of the therapeutic process stands out. Something about her or him and it, the particular therapeutic action, is a match. Its heightened importance in a particular treatment alerts one to the potential benefit of that technique for more general use. Anaïs was such a patient, and the process of recognition such a therapeutic technique. My work with Anaïs alerted me to the power of recruiting recognition processes specifically for the treatment of dissociation.

Anaïs

My patient, a fifty-year-old physician and surgeon whom I shall call Anaïs, watched the improvisational exercise described in the following as though it was a matter of life or death. Not long afterwards, she came to see me for the first time and told me of a deep personal tragedy. This is what she watched, as a spectator:

Two women who never met before get up and go to the front of the room. It is their turn to do a bit of improv (short for improvisational work). One of them is somewhat imperious; the other casual, a bit bedraggled. “Have an interaction where all you do is gaze at each other—no words allowed,” yells someone from the audience, giving the women the prompt for their exercise. Over the course of ten minutes, the two women gaze at each other, riding wave after wave of nonverbal interaction. By the end of the exercise, the imperious woman is sobbing, girlish, soft. Her partner, tender, glowing, her fatigue gone, is holding the space. Strangers before the improv class, they are now bonded.

There is a way in which improv is the thing that drove Anaïs, a physician and surgeon, to treatment. In the wake of a personal tragedy that threatened the very integrity of her self and life, this 50-something woman attended an improv class, where the incident I just described took

place. There is an oft-quoted line from the movie *When Harry Met Sally* that goes, “I’ll have what she’s having.” That’s exactly what Anaïs said to herself when she saw that piece of work. By the time she came to treatment, she had pursued improv classes with determination for quite a while. There was only one problem: She could not act. You can’t do improv without access to self. With no access to her self, nor with much access to the vitality, energy, and direction associated with a felt self, she couldn’t do improv. And, to use the vernacular, that drove her crazy.

A bit of recent history: Eight years earlier, a difficult case presented itself. She consulted with many colleagues, including her chief of service, discussing the pros and cons of various procedures. The final decision rested with her. Anaïs threw her weight behind a controversial procedure; her recommendations were accepted. Anaïs performed the surgery and the patient died on the operating table. A board was assembled to evaluate what happened. Her chief, a man who had fought to bring her to his hospital and had been a strong advocate, excoriated her decision before the board, presumably to save his own skin. After carefully weighing the evidence, the committee cleared her of any medical wrongdoing. Despite the exoneration by the board, Anaïs was devastated by the tragedy and shaken by the betrayal by her boss. Humiliated, and, in her mind, her professional reputation irrevocably tarnished, Anaïs resigned from the hospital. She took a leave from medicine for some months. She blamed herself for freezing under pressure. The improv, requiring spontaneity and rapid thinking on one’s feet, promised a cure for her affliction.

She returned to the practice of medicine, but gave up surgery; she took a fellowship in anesthesiology. Her functional self in control, she pursued her new specialization with grim determination. She took also took up acting classes, especially improv, approaching it as a practice. Yet when her turn came to perform, she felt invariably wooden, stiff, and at a loss for words. Each time she was mortified. Interestingly enough, she persisted.

At first sight, Anaïs presented as a passionate person. As long as she was not the focus of attention, hers or anyone else’s, no one would experience her as disembodied or not there. It took a while to notice that her passion was always, with no exceptions, on behalf of some other person. When I would ask Anaïs how *she* felt about something, she went blank. Not only was she at a loss for words; but there was a sense of nothing there, nothing that words would attach to. We were touching a palpable void, experienceless, wordless, selfless, the consequence of her dissociation. Another manifestation of her dissociation was in the realm of emotion: On the extremely rare occasions when tears of grief or loss would come to her eyes, she tightened her mouth, pursed her lips, and swallowed. A pause, and then the next sentence would be a shift to protective coherence. Drawing her attention to the lip pursing, with gentle encouragement to allow her tears to flow more freely, had the opposite effect: Attention stopped the flow of tears. They would vanish without a trace even faster than when left to her own devices.

Anaïs would recount history and personal experiences in one of two modes: a reflective, measured narrative about herself that had the hallmarks of insight-enough and reliability, but was lifeless; or an impassioned narrative in heroic mode about someone or something that had moved her. On those latter occasions, the tears of being moved would flow. That is, they would flow until I drew our attention to what had moved *her*. Then these tears would stop just as abruptly as the tears of loss or grief that got swallowed.

These tears of being moved became our GEMs, the thread of the treatment. I started to understand that although their content was about the other, in her passion and in her tears was self: the felt sense and experience of that integrated core self that had been excluded very early on in her

life. When she was moved by a painter who toiled in anonymity, or by the persistence of a heroic person choosing humanitarian work in a war zone despite political persecution, something of her self and its plight was shining through. Hers were tears of recognition, marking a match between herself and the situation that moved her, yet with dissociation obliterating any felt sense of her place in this recognition equation. What about what she was telling me moved her? Why, of all the moving stories in the world, it was this one that affected her singularly. I became interested in what about it captured her, and what about her was captured in it, thus accounting for the match, the click of recognition and her experience of being moved.

Undoing Dissociation Through Recognition, One (Deceptive) Pixel at a Time

The patient, referencing the work of pointillist portrait painter Chuck Close, came to call this work “one pixel at a time.” Together, we were painting a self-portrait, one pixel at a time. Or more accurately, for her metaphor was quite apt, one deceptive Chuck Close pixel at a time—deceptive because Chuck Close’s pixels or dots, in fact, are neither simple nor elemental: From the normal distance of viewing a painting, it looks like each portrait is made up of thousands, or maybe more, of little dots. However, upon close inspection, each dot is, itself, a whole picture. The pixels are actually little fractals, each little detail containing the complexity of the whole thing. We were developing the methodology of *reverse recognition* or *recognition from the outside in*: I recognized something of her self in what moved her about the other, and used my recognition about what moved her to mirror back to her something about her self, to which she otherwise had no access. “I see you,” was my therapeutic action. Through her empathic connection to me and my experience, she could see herself as I saw her.

Her trust in me was deeper than her trust in herself—after all, she had killed a patient and lost her mother’s delight (see the following), so what was there to trust? Slowly, she started to allow herself to take in what I mirrored to her about her self, which I gleaned from what moved her. I became a vitality and passion detective, on the trail of her self through her affective reactions to others, for affect in tiny doses gets through the dissociative barrier like nothing else. In addition, undaunted by its grimness, I also validated the tremendous competence of her functional self. Reflecting its qualities of courage, determination, devotion, and will, I became a cheerleader for how her functional self channeled her self’s steadfast determination to survive, no matter what.

One session, Anaïs came in devastated: A young patient received a diagnosis that condemned him to a life of unrelievable chronic pain. Anaïs grieved for the hopelessness of his condition and the intolerable despair that he must feel. This was our way deeper in: The previous manifestations of qualities of self through recognition of them in others had been in the heroic mode, the things that evoked tears of being moved. This was the first time her recognition, with self disowned, was marked by affects of the hopelessness, despair, and crushing devastation of dreams smashed. We were making progress.

However, her inability to perform in improv classes remained unaffected. She persisted in attending. Her persistence was evidence of strivings coming from different sources inside: The mindless vitality-seeking action self wanted to have what those two women were having, and pursued it single-mindedly, as is its wont. The other source was transformance-based knowing in action: Although, consciously, she couldn’t understand why she kept going to classes that only

resulted in her feeling mortified and frustrated, her sense of knowing guided her to the precise situation she required for her healing.

We continued working with her dissociation via recognition in reverse: We continued to work our way from the features of the external stimulus back to what inside that stimulus must have matched and continued with my recognizing her and seeing her, and helping her see herself through my eyes, and eventually feel her self. We had an accumulation of pixels and fractals and phenomena with various tags of self. Bit by bit, she started taking in more of my reflections. She started to recognize spontaneously, from the inside out, some lovely things about herself. This happened more in my presence than when she was alone, but that was ok. Little-step-by-little-step, there were heraldings of more and more self coming online.

And then, two healing transformative moments brought about a quantum transformation (cf. Fosha, 2006). Both involved experiences of being seen by another, seeing herself through the eyes of that other, and then becoming able to see and even to feel herself as others saw her, and experienced her. "I see you seeing me and I trust you. And now I see myself as you see me." Interestingly, these breakthroughs came from outside the treatment. As she told me, given that it was my job to help her, that built-in bias disqualified me some. She trusted me more than she trusted herself, but she trusted others with no vested interest in her well-being most of all. Here is what happened.

Anaïs was at a postconference social gathering with a group of doctors. By chance, it turned out that two of the doctors at the party had been residents at the time of Anaïs's trauma. It was a lovely evening. Tongues loosened and inhibitions relaxed by good food, wine, and the lateness of the hour, reminiscences started to flow. The two former residents spoke of what an inspiring mentor she had been to them, moved by qualities that she had accused herself of lacking. One of them briefly teared up, speaking of what a vacuum had been left in the training after Anaïs left. That the testimonials came unbidden made them believable: Something inside Anaïs relaxed. In session, she talked of how much she had loved mentoring young surgeons and how good she had been at it. For the first time, she saw that the tragedy of her patient's death did not invalidate all the good experiences of those years, experiences that continued to live in herself, and lived in others too.

As serendipity would have it, a few days later, she dutifully showed up for improv class. This time it was her partner who froze, almost unable to speak. Anaïs became very focused on his experience, helping him thaw by making the content of the improv congruent with his being unable to speak. Focused on her partner's experience, she inadvertently did a great improv. In the debriefing that followed in the class, Anaïs was focused on how well her partner had done. Cathy, a fellow improv devotee who knew of Anaïs's struggles and self-abnegation, had witnessed the whole thing. In the debriefing, Cathy turned everything around, illuminating Anaïs's quiet brilliance in the work. The argument was irrefutable. Yet it was a personally meaningful little idiosyncratic detail that allowed Anaïs to trust Cathy's recognition of her and thus to come to recognize something about herself. Cathy, who had been very frustrated with Anaïs's self-deprecation, had an air of *gotcha* as she unfolded her argument, certain that Anaïs was finally busted. It was Cathy's air of self-satisfaction, the psychological incorrectness of Cathy's unbridled delight in herself, that allowed Anaïs to trust the offering. Cathy's gleeful *gotcha* affect allowed Anaïs to believe in the genuineness of what was being reflected back to her. She saw herself through the eyes of the other, believed what she saw, and liked it. And, most important, she could take it in and start to own it. Anaïs said that, after that experience, for the first time in 8 years, she felt normal. She

also said that she knew that she would never again get as low as she had been for all these years. There was now a solid floor where a bottomless pit had been.

These two moments in close succession, occurring against the therapeutic background where we were painting her self-portrait, one Chuck Close fractal after another, were transformative. Something started to shift.

When her rigorous respecialization in anesthesiology was completed, she did not fill the space of her free time with another herculean labor. Anaïs allowed herself down time, time to wonder and meander. She reported that, on a Saturday afternoon, casually strolling about, she felt something awaken inside her: She likened that something to ET, the extraterrestrial creature from the Spielberg movie by that name. This ET-like something inside spoke to her and said “Where have you been all this time?” The voice of a very young, innocent, and tender vulnerable self was showing up.

In earlier work, Anaïs would detail all the ways in which her mother’s mothering had been beyond reproach. Now a process began whereby we could, for the first time, examine the heart-break of her early life, one congruent with the need for the dissociation. As a baby, Anaïs had been very much adored and treasured by her mother, who had always dreamed of having a baby girl. Inexplicably, that adoring mother left: The baby lost that mother, and thus also lost access to the felt sense of seeing her self, her own adored-by-mother self, reflected in her mother’s eyes and face. From our reconstructive work, it seems that when Anaïs was two, with the birth of a new baby, for reasons we don’t yet understand and may never know, her mother emotionally left, in a dissociative break from which her mother never recovered. Anaïs’s young, vibrant, mother who adored her and delighted in her in the first 2 years of her life was replaced by a perfectly competent, generically quite caring mother who was no longer there to really see Anaïs as her own specific precise uniquely idiosyncratic self or to respond specifically and contingently to her needs. A memory came: As a five year old, in response to a betrayal, Anaïs, who by then was a responsible little girl who rarely cried, wept inconsolably. Her mother, well within earshot, never came. She was left to cry alone. This was one of those instances when, to quote Eigen, Anaïs’s equipment failed, and so Anaïs was left “stranded in aliveness too much for the heart to bear” (Eigen, 2004, p. 86). At precisely the moment when the attachment figure needs to step in and counteract the child’s aloneness and overwhelming emotion, Anaïs’s mother did not step in. Dissociation did. If dissociation were to have its druthers, no such heartbreak ever again.

Anaïs is working to trade in dissociative strategies for newer ones that privilege togetherness in the face of distress. Her exclusive focus on the other is joined by the emergence of some healthy self-interest. She is beginning to enjoy asking the question “and what do *I* want?” It is work in progress. She is also beginning to experience the grief and betrayal of the early loss of her mother, as well as the grief and betrayal involved in her professional trauma. Her shame on the wane, she weeps for herself, and for all her losses. Mourning for the self (Fosha, 2009a) is emerging: She is starting to grasp how different life is when lived from within the felt core self.

Anaïs’s resilient self is taking up more psychic real estate. Where only grimness was, now there is exuberance as Anaïs is starting to have some fun. So is ET, who is now a toddler. We are at a crucial moment in our work: Anaïs’s internal ET toddler is picking up where the historic toddler (the child she was when her mother dissociatively departed from fully felt embodied contact and connection) left off. Anaïs and I are walking the thin line separating healing from retraumatization. Together we are working really hard to help her not forget about ET: We want

to make sure she attends and tends to this exuberant little toddler who is beginning to trust that maybe it is OK to be on this earth.

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The title of this article comes from a William Blake poem. This is the stanza that the line comes from: “To see a World in a grain of sand, And a Heaven in a wild flower, hold Infinity in the palm of your hand, And Eternity in an hour” (Blake, 1863, p. 105).

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