## Observed & Experiential Integration (OEI): Discovery and Development of a New Set of Trauma Therapy Techniques

#### Richard A. Bradshaw

SightPsych Seminars Incorporated and Trinity Western University

#### **Audrey Cook**

SightPsych Seminars Incorporated

#### Marvin J. McDonald

Trinity Western University

Psychotherapy integration leaders have recently asserted that the future of psychotherapy will involve incorporation of neuroscience. In the past 18 years, techniques have been discovered and developed to treat trauma and dissociation at all three neurobiological levels of Porges' (2001, 2007) polyvagal theory. This approach is known as Observed & Experiential Integration (OEI). The originator incorporated elements of Focusing,

Richard A. Bradshaw, SightPsych Seminars Incorporated, Vancouver, BC Canada and Department of Counselling Psychology, Trinity Western University, Langley, BC Canada; Audrey Cook, SightPsych Seminars Incorporated; Marvin J. McDonald, Department of Counselling Psychology, Trinity Western University.

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Correspondence concerning this article should be addressed to Richard A. Bradshaw, Ph.D., R.Psych, Swingle & Associates - Psychoneurophysiologists, Suite 630-1190 Melville Street, Vancouver, BC V6E 3W1 Canada. E-mail: rick@sightpsychology.com

Eye Movement Desensitization and Reprocessing, and Educational Kinesiology. OEI theory emerged from experiential psychotherapy, and relational psychoanalytic and behavioral concepts were assimilated during 45,000 hours of psychotherapy. Five sets of OEI techniques are used for titration of affective and somatic intensity, reduction of negative transference, and deepening of social connection. OEI involves neuroactivation & microattunement (NAMA). It has been applied with body therapies and neurotherapy and used with children, couples, and families. OEI has also been applied to addictive and self-destructive urges, panic attacks, and eating disorders. Case examples illustrate applications of this treatment.

Keywords: PTSD, OEI, transference, addiction, panic

We begin by locating Observed & Experiential Integration (OEI) in the psychotherapy integration literature. Relational psychoanalysis is assimilated into an experiential base. Theoretical integration also includes a neurobiological behavioral model of OEI treatment, which is consistent with a polyvagal perspective (Porges, 2007). Following that, we have explained the five sets of OEI techniques with their intended purposes. Interspersed with those descriptions are neurobiological behavioral conceptualizations for each set of treatment techniques, with clinical case material inserted throughout. Specialized applications of OEI are then reviewed, and applications of OEI to Complex Posttraumatic Stress Disorder (PTSD) are discussed. Finally, case examples are presented to illustrate application of these techniques in and across sessions.

Several leading figures in psychotherapy integration are in agreement that brain science holds great promise for improving psychotherapy. Prochaska and Norcross (2010) anticipate that in the future psychotherapy might be called "brain therapy." During OEI the neurobiology of attunement, including activation of mirror neurons and "embodied simulation" (Gallese, Eagle, & Migone, 2007), is combined with a novel set of microlevel techniques to address abreaction and dissociation. The major contribution of OEI to psychotherapy integration is a series of interventions that activate and address psycho-physiological schemas in a focused manner: Covering and uncovering the eyes and tracking movement through the visual fields results in major shifts, not only in affective and somatic intensity, but also in perceptions of self and others. As Norcross, Freedheim, and Vandenbos (2011) state, "the burgeoning field of neuroscience will likely dissolve the gap between mind and brain. It will also require a whole new way of thinking about, and talking about, how psychotherapy works" (p. 755).

#### LOCATION OF OEI WITHIN PSYCHOTHERAPY INTEGRATION LITERATURE

Gold and Stricker (2006) describe four modes of psychotherapy integration: (a) Assimilative Integration, (b) Technical Eclecticism, (c) Common Factors Approach, and (d) Theoretical Integration. Although the development of OEI has primarily involved assimilative integration, all four approaches have been applied to some extent.

### **Assimilative Integration**

Experiential Psychotherapy: The Heart of OEI

One of the authors, Audrey Cook (A.C.), was the originator of the three primary OEI techniques. She had practiced almost exclusively from an experiential orientation since she began work as a psychotherapist. She attends to, and works with, second-by-second changes in clients' faces (particularly the eyes) and tiny shifts in voices and bodies. These can be either observed by the therapist, or reported by clients as they experience these variations in affective or somatic quality and intensity. In this way, OEI overlaps with Accelerated Experiential Dynamic Psychotherapy (AEDP; Fosha, 2002; Fosha, Paivio, Gleiser, & Ford, 2009). At any given moment in therapy, the focus of A.C.'s OEI work is upon individual client expressions, often in response to therapist-initiated directives (alternately covering eyes, following movements of her face or hand, changing body postures, focusing on visual stimuli, or thinking about certain events or people).

#### The Foundation: Focusing

Experiential therapy has a long and respected history, and A.C. was heavily influence by Eugene Gendlin, the first editor of the journal *Psychotherapy: Theory, Research, Practice, Training* from 1964 through 1975. Gendlin's (1984) Focusing model involves both "bottom up" processing (attending to subtle somatic and affective states and shifts) and "top down" reflection (meaning that emerges through multiple interconnected levels of awareness). One of the earliest papers on Focusing involved the use of experiential awareness in psychoanalytic interpretation during treatment (Gendlin, 1968). This approach is still actively used today, with an extensive network of clinicians and trainers (Gendlin, 2008), and Focusing has

been used in trauma therapy (Morse, 2003; Turcotte, 2003). Two trauma therapies that have emerged from Focusing are Somatic Experiencing (Levine, 1997) and Sensorimotor Psychotherapy (Ogden, Pain, & Fisher, 2006). OEI has been fruitfully combined with techniques from each of those models. During OEI, many aspects of Focusing are applied. Clients attend to subtle somatic and affective states, and note shifts as they alternately cover their eyes or have their eyes guided to particular locations in their visual fields.

## Process-Experiential Therapy, Eye Movement Desensitization and Reprocessing (EMDR), and OEI

Parallels between experiential therapies and neurologically based treatments like Eye Movement Desensitization and Reprocessing (EMDR) have been discussed by leaders in psychotherapy integration. Bohart and Greenberg (2002) compared Focusing, Process-Experiential Therapy, Client-Centered Therapy, and EMDR. All characteristics attributed to EMDR in the following quotation apply to OEI:

For both EMDR and experiential approaches, psychotherapy is *facilitated client self-healing*. Therapies supply interaction and procedures, but the steps of healing are generated by and emerge from the client's process. EMDR and experiential therapists would agree with Orlinsky, Grawe, and Parks (1994), who said, "we view psychotherapy as 'the activation through the process of interpersonal communication of a powerful endogenous therapeutic system that is part of the psychophysiology of all individuals and the sociophysiology of relationships' (Kleinman, 1988, p. 112)" (p. 278). Based on our experience, EMDR and experiential psychotherapy have many things in common. EMDR, in many cases, seems to be quite efficient in facilitating the operation of self-healing processes found in experiential psychologies. In addition, because it can work quite rapidly, some of the self-healing processes found in experiential therapy seem to telescope so that they can be more clearly observed and studied (Bohart & Greenberg, 2002, p. 239, original emphasis).

It is possible to self-administer all of the OEI techniques, and many clients have exponentially speeded their healing by doing so. OEI has similarities to, and differences from, EMDR (see Bradshaw, 2008 for a review of these, along with a chronology of OEI discoveries, developments, and research). Bohart and Greenberg noted that in both EMDR and Experiential Psychotherapy, there is:

- "... discouragement of abstract intellectual speculation or unfelt narration of events", and
- emergence of "... new facets (of experience) that do not seem to be logically connected to the presented problem, but... may be emotionally connected" (pp. 251–252).

OEI processing exhibits these features. During Process-Experiential Psychotherapy, Bohart and Greenberg note that it is necessary for clients to articulate meaning. In contrast, during Focusing and EMDR, such verbal expression is unnecessary. During OEI processing, the relative importance of verbal articulation seems to vary, depending on the personalities of clients. Some fully resolve their traumas through somatic and affective discharge, while others remain in states of confusion or disbelief until they can grasp what has changed and describe the shifts that have occurred. In many therapy models, clients depend on therapists to provide "interpretations"; however, with OEI they often arrive at such insights themselves.

### Coapplication and Integration of Gestalt Techniques

Bohart and Greenberg (2002) also describe using gestalt dual chair work to explore and integrate disparate thoughts and emotions associated with particular decisions and relationships. With OEI, such disparities can often be accessed by having clients attend to their experiences with one eye covered and then comparing these with their experiences with the other eye covered. If these experiences differ significantly, alternately covering left and right eyes often leads to integration and resolution. This can be done either in the office under the direction of a therapist, or at home between sessions, when clients feel stuck (numbed out, disconnected, dissociated) or stirred up (triggered, unusually intense). When applied at home, however, the lack of attuned therapist response to somato-affective activation in clients typically renders the process somewhat less effective. Various enactment techniques introduced by therapists, such as gestalt empty chair, dual chair, and psychodrama have been effectively combined with OEI to bring dissociated affective and somatic material into awareness for processing. OEI and gestalt therapy have many commonalities. The goal of both is to bring old and/or unacceptable material into the present and to integrate it with the totality of the self. In this way, separated or disowned parts merge with the rest of the personality, allowing greater freedom, awareness, and access to all aspects of the person (talents, perceptions, emotions, and relational possibilities).

### **Assimilation of Relational Psychoanalytic Therapy**

Psychoanalytic theory and techniques were assimilated into the experiential base of OEI as it developed. Rick Bradshaw (R.B.) and A.C. both had exposure to psychoanalysis through supervision in clinical hypnosis. At

its foundation, psychoanalytic therapy is about the relationship between the therapist and the patient. In *relational* psychoanalysis (object relations, interpersonal therapy), analysts provide feedback (interpretations) to strengthen the relationship via the process outlined by Wolitzky (2011):

Feeling empathically understood following an interpretation by the therapist is, after all, an experience (Eagle & Wolitzky, 1982). Thus, explanation and experience can be intimately linked. This view is echoed by Kohut (1984), who believed that the therapeutic impact of an interpretation derives not so much from the content of the interpretation but from the fact that it can lead to a feeling of being understood and thereby strengthen the patient-therapist bond (p. 83).

# Microlevel Interpretations Contingent on Eye Movements and Facial Expressions

This relational-experiential process has been a guiding principle throughout the development of OEI. In addition to providing these empathic reflections *across* sessions over long periods of time, during OEI this occurs continuously on a microlevel *within* sessions. When OEI "Glitch Massaging" (described below) is applied, for example, various states of somatic and affective intensity (or numbing) occur in close temporal proximity. As each one arises, the therapist empathically responds through intentional attunement ("I'm seeing some deep sadness coming up there", or "Is that rage you're feeling there?"). These observations from the therapist are stated *when the client's eyes* are in particular locations within their corresponding orbits, moving in particular directions, and focused on stimuli at specified distances from the client. Such therapist reflections from skilled practitioners coincide with the client's somatic and affective experiences, conveying understanding, and thereby facilitating "joining" with the client.

## OEI Transference Checking and Clearing

Through careful observation of clients' facial reactions during OEI Switching (alternately covering left and right eyes), it was noticed that clients were reacting negatively to our faces (expressing fear, anger, sadness, or shame in response). It was clear that they were having transference reactions and, depending on which eye was covered, this would change. Fortunately it was discovered that, if clients kept Switching, these distortions of proximity, appearance, somato-affective reaction, and projected cognition would dissolve. Freud (1938) claimed that transference interpretation was the most powerful psychoanalytic technique; however, as John

Watkins lamented, a vast number of hours are required for transference analysis and interpretation: "Unfortunately, waiting for the spontaneous appearance of these reactions and their projection onto the person of the analyst takes much time. Is it possible that some other technique could achieve the same laudable results in much shorter time?" (Watkins & Watkins, 1997, p. 215). Watkins alluded to the use of ego state therapy to shorten the time required for resolution of transference reactions, but with OEI it is often possible to assess and resolve such projections and distortions in a single session by focusing on microlevel therapeutic events.

Recently, researchers have explored various dimensions of transference (Bradley, Heim, & Westen, 2005). Not surprisingly, four of the five transference dimensions found via factor analysis coincide with the four major attachment styles identified by Main, Kaplan, and Cassidy (1985) in the Adult Attachment Interview:

- Angry/entitled transference behaviors—making excessive demands while simultaneously being angry and dismissive—corresponded with unresolved (disorganized) attachment.
- Anxious/preoccupied transference behaviors—fearing rejection and disapproval—corresponded with preoccupied attachment.
- Avoidant/counterdependent transference behaviors corresponded with dismissive attachment.
- Secure/engaged transference behaviors corresponded with secure attachment.

Bradley and her associates summarized their conceptualization of transference: "Transference phenomena...reflect the tendency of the brain to map current onto past experience and to craft responses that represent a combination of automatic activation of procedures and mental representations from the past, (and) integration of current with past data and experience to generate responses that reflect the coactivation of old and new neural networks..." (Bradley, Heim, & Westen, 2005, p. 348).

Through thousands of hours of OEI therapy, it has become apparent that there are perceptual distortions which precede, and contribute to, the development of these global relational styles. Individuals may *see* the faces of others as angry, condescending, disapproving, sad, or threatening, when they are not. Their social reactions to, and relations with, others can be inappropriate (mismatched with current situations) as a result. This will lead, in turn, to more negative intrapsychic dynamics, consistent with Paul Wachtel's cyclical psychodynamic theory (Gold & Wachtel, 2006; Wachtel, 1997, 2011). In Wachtel's theory, behavior, interpersonal relationships, and unconscious motivation and conflict are considered reciprocally influential. If clients repeatedly interpret and respond to the behavior of others in skewed or distorted ways, they strengthen the psychodynamics that are typically associated with transference phenomena in therapy.

## Neurobiological Concomitants of Intrapsychic Dynamics: Id-Ego, and Conscious-Unconscious

Fredric Schiffer, a psychoanalytically trained psychiatrist at Harvard University, worked with postcommissurotomy patients and was fascinated to find that they seemed to have "two minds" (Schiffer, 1998). The hemispheres of the brain control contralateral halves of the body, which has implications for observed dualities of experience. He reported, for example, a man who was motivated to go for a walk, but as he took several steps to go the other leg halted and he found himself physically turned to return to his starting point. One "mind" (hemisphere) wanted to go out for a walk, and the other didn't. Likewise, another patient lit a cigarette with one hand and put it out with the other. Schiffer could not help considering the parallels to psychoanalytic representations of the mind (id/ego, and conscious/unconscious). He found that by covering all except the lateral (outermost) visual field of one eye and then switching to the other lateral visual field, major shifts in emotional state would result. He described these as "immature," "childish," or "irrational" (paralleling the concept of id) in contrast to "mature," "adult," or "rational" (paralleling the concept of ego).

Schiffer's Dual Brain Psychology has similarities to OEI, but it is different in at least two ways: First, neurobiologically, Schiffer blocks light from both eyes, with the exception of the lateral visual field of one eye, whereas during OEI we use monocular covering. Second, he has patients change taped glasses or goggles, from a pair that blocks all but the left lateral visual field to a pair that blocks all but the right lateral visual field. He then comments on this difference in experiences metaphorically during talk therapy. In contrast, with OEI we use a collection of therapeutic techniques described later in this article (including alternate monocular hand covering of the eyes) to neurologically activate, dissipate, and shift perceptions through repeated applications.

## Assimilation of Affect Bridge, Somatic Bridge, and Ego State Therapy Techniques

We have observed shifts in somato-affective state and perceptions of self and others, as clients have alternated right and left eye covering. This parallels Schiffer's observations associated with apparent chronological age, from which the states seem to emerge. The range and complexity of the differences we have observed between these states, however, is much broader than those reported by Schiffer. Differences observed during OEI

have been consistent with structural dissociation theory (van der Hart, Nijenhuis, & Steele, 2006) in which there can be any number of 'apparently normal' (contented, curious, rational, playful) and 'emotional' (sad, frightened, ashamed, angry) parts. During OEI procedures, R.B. has applied Watkins' psychoanalytic affect bridge and somatic bridge techniques (Watkins, 1971, 1992, respectively). With dissociative clients, he has routinely extended OEI in combination with ego state therapy (Watkins & Watkins, 1997) to work with alters. With some clients suffering from Dissociative Identity Disorder (DID), for example, it is possible to shift from a "babbling" preverbal child state to an older, more verbal child state who can speak for the younger state, by simply having clients switch the eye they are covering.

#### **Technical Eclecticism**

The assimilation of relational psychoanalytic theories and techniques into an experiential framework established the heart of OEI theory. From that experiential-psychoanalytic core, technical eclecticism was applied.

Incorporation of Techniques Without Adoption of Underlying Theories

After A.C. was trained in EMDR in 1993, she noticed that certain clients were unable to smoothly track visual stimuli, or had "lazy eyes" (i.e., only one eye would track stimulus movement). She also found that many clients with early complex relational trauma became overwhelmed with intensity or numbed out during processing. Because she found EMDR effective, but perhaps too intense or difficult, for trauma processing with such clients, it occurred to her that the procedures could be adapted "one eye at a time."

#### Guided Eye Movements and Bilateral Stimulation

She took techniques that worked (guided eye movements and bilateral [auditory and tactile] stimulation), but did not adopt the underlying theory of EMDR. Audrey's keen observation of second-by-second processing alerted her to changes in affect and somatic sensation that occurred, as clients alternately covered their right and left eyes. Clients' pains decreased, disturbing emotions subsided, and perceptions changed. That technique was simply labeled "Switching."

In that same time period (1993–1995), A.C. read an article in which the author reported noticing "glitches" in eye movement during EMDR processing (Thomas, 1993). She began trying various movements of her hand to guide her clients' eyes *into*, and *through*, those glitches (a procedure now labeled Glitch Massaging). She wanted to shift physical and emotional intensity in her clients, to facilitate resolution of early trauma. In addition to increasing her clients' awareness, she activated and dissipated their negative symptoms within a therapeutic "window of tolerance," a term discussed more formally by John Briere (Briere & Scott, 2006). While she noted and used these perturbations in eye tracking during smooth pursuit movement, she did not embrace Shapiro's (1995) "adaptive information processing" model.

#### Alternate Left and Right Eye Visual Tracking From Periphery to Midline

A technique from Educational Kinesiology (Brain Gym; Dennison & Dennison, 1986, 1994) that A.C. had used to facilitate visual integration was known as 'lazy eights.' Clients would trace a horizontal figure eight ( $\infty$ ), crossing the midline repeatedly through visual tracking of movement. The underlying theory for this technique (to resolve visually related learning disabilities) was not adopted. Instead, she adapted the exercise, using one eye at a time, and had clients track a visual stimulus from each ear to the nose, alternating sides. This OEI technique was labeled "Sweeping" and is now used to resolve emotionally related physical symptoms such as headaches, drowsiness, tingling, numbing, dizziness, and visual disturbances.

## Balance Boards and Acupressure Techniques

During trauma processing, when clients dissociated we (A.C., R.B.) noticed they would usually lose their balance. This loss of balance could be quickly detected and corrected in sessions using balance boards. "Wobble" on these devices provides immediate feedback to clients that they are 'checking out.' In order not to fall off the board, they have to experientially ground themselves in their bodies to continue processing. We did not draw upon specific theories about use of balance boards for sensorimotor integration or strengthening of muscles in the lower extremities. In the development of OEI, such techniques simply 'worked,' so they were incorporated in a larger set of OEI tools. Likewise, both A.C. and R.B. were trained in various acupressure techniques. They selectively use some of these to resolve specific symptoms during OEI processing, but have not

adopted underlying theories regarding flow and blockage of life force (Qi or Chi), or ascribed associations with physical organs.

#### **Common Factors**

Variables and Constructs Associated With Positive Therapy Outcomes

In this approach to psychotherapy integration, theory and techniques are developed with reference to core aspects of treatment that have been empirically identified as contributing significantly to positive therapy outcomes.

## Empathic Attunement

Since its inception, many common factors that contribute to psychotherapy effectiveness have been incorporated in OEI, the most essential being empathic attunement. OEI practitioners are trained to provide continuous feedback to clients regarding physical and emotional changes they observe, and this typically cross-validates the internal experiences of clients during OEI processing. Therapists individualize adaptations and combinations of techniques and remain responsive to the slightest reactions of clients. Part of OEI training involves identification of, and responsiveness to, tiny paraverbal and nonverbal "intensity and conflict markers." "Intensity Markers" (e.g., reddening or moistening in rims of the eyes, facial flush, sighs, tension in jaw) denote higher levels of emotional or somatic intensity. "Conflict Markers" (e.g., halts or hesitations in speech, furrowing of the brow, inconsistencies between verbal and paraverbal/nonverbal communication) denote internal emotional conflict or cognitive confusion. These terms originated in gestalt therapy (see Greenberg, Elliott, & Germain, 2003, for discussion of conflict splits in particular).

The importance of therapeutic alliance has guided the development of OEI. For instance, rather than expanding techniques from using (a) hand movements, to using (b) wands or external objects to guide clients' eyes, A.C. instead added the use of (c) therapist's face, body, and gaze, as foci for visual tracking by clients. This direction is much more relationship- and attachment-oriented, facilitating attunement.

### Insight, Self-Awareness, and Hope

Full conversations do not typically occur during active application of OEI techniques; however, clients gain considerable self-awareness and

increased mentalizing capacity (Bateman & Fonagy, 2004; Fonagy, Gergely, Jurist, & Target, 2002). As OEI develops, we are increasingly encouraging clients to self-reflect *during processing*, often by querying conflict and intensity markers that are observed. In OEI, individuals are also provided with new experiences during treatment, including integration of disparate facets of their experiences (emotions, physical sensations, and visual perceptions). Finally, through experiential exercises starting in the first session, clients leave with renewed hope. They often experience major affective, somatic, and relational shifts in minutes, rather than months, which encourages persistence with this treatment even after years of counseling.

## Use of Emotion

Another major common factor in effective psychotherapy is the use of emotion, and this drives much of what occurs in OEI. During OEI, clients engage in emotional processing. Greenberg (2008) reviewed research regarding the use of emotion in psychotherapy, including his own program of research on therapy process. He advocated the integration of empirically supported emotion-focused change processes in psychotherapies. This occurs in OEI through all five of his suggested principles of change in the affective domain: (a) increasing emotional awareness, (b) facilitating emotional expression, (c) improving emotion regulation, (d) promoting greater reflection on emotion, and (e) transforming emotion with the activation or presentation of alternate emotion(s).

Emotional awareness. Many clients with complex PTSD are confused or conflicted in their own awareness of emotional states. This may arise from alexithymia (Frewen, Dozois, Neufeld, & Lanius, 2008) or from multiple coexisting emotional and perceptual experiences. In OEI, emotional states are often found to differ depending on which eye is covered. A common example is a woman involved in an abusive relationship with a partner. With one eye uncovered, she might experience anger, sadness, and fear as she thinks about her partner. With the other eye uncovered, she might look up at her therapist and respond, "... but he loves me ...." This disparity can interfere with emotional awareness and acceptance. OEI Switching can facilitate integration of these experiences and dissolve associated distortions in perception.

Emotional expression. When overwhelming emotional experiences occur they are often dissociated in one form or another and become blocked from expression. OEI Switching and Glitch Massaging can facilitate expression of these emotions. At times an entire event is recalled but seems unreal to the individual. It is not unusual for people to feel con-

nected to an event with one eye covered but feel disconnected with the other eye covered. Switching can integrate these experiences, permitting emotional expression and release. Occasionally a client will have tears pouring out of one eye (with the other eye covered), but no tears from the other eye when it is uncovered (completely dry). After repeated Switching, such clients emit tears from both eyes, expressing deep sadness or fear that was previously blocked. Emotions can also be very effectively released using Glitch Massaging (described below).

Bohart and Greenberg (2002) theorized that memories and their associated negative cognitions and affects are stored in encapsulated neurological networks. They noted that, during both experiential therapy and EMDR, these needed to be activated for integration of nondeclarative memory (images and sensations) and declarative memory (cognitions) to occur. With OEI, dysfunctional affect is discharged, and more adaptive cognitions emerge; however, during processing it has been found that negative self-referencing beliefs are *spontaneously* replaced with neutral or positive cognitions once the underlying intense affect is dissipated. This is why we no longer require explicit identification or expression of cognitions (negative *or* positive). Occasionally, with particularly intractable self-critical inner voices, a patient's eyes can be guided through the visual fields until a spot is located that is most associated with such a negative introject. The eyes are then guided through, toward, and away from that spot to attenuate the intrusion.

Because emotional expression in therapy is such a core guiding principle in OEI, we have expanded treatment to include combinations of OEI, body therapy, and neurotherapy. Often emotions become "stuck" in the muscles and fascia of the body. They can be *activated* using myofascial release, and then *resolved* using OEI. At other times, simply having body therapists move patients' heads and limbs through various motion sequences or place them in selected positions will activate emotions, which can then be dissipated with OEI. It is also possible to bring posttraumatic emotional states to the surface using neurotherapy (primarily quantitative electroencephalography brain-driving), in which slower-frequency waveforms (theta and alpha) are increased in selected cortical regions. OEI cotherapy can then integrate this material as it emerges.

Because emotional expression is so central to OEI processing, it has sometimes been problematic in cross-cultural applications. In some cultures, expression of vulnerable emotions (sadness and fear) is prohibited, particularly for males. When we provided OEI treatment and training for therapists in Indonesia we encountered this phenomenon. Indonesian females (and both male and female disaster relief workers from outside Indonesia) responded well to OEI, expressing such emotions and gaining considerable relief. In contrast, Indonesian males would typically be limited in their expressions to anger and complaints of physical pain. It may be

that combinations of OEI and body therapy (or neurotherapy) will be required to access such emotions in males from these cultures. We were able to collaborate with our Indonesian colleagues to arrive at a culturally consistent and comprehensible introduction to OEI: "We are going to massage your brain, using your eyes, to lift your heavy heart."

Emotional regulation. One of the hallmarks of complex PTSD is affect dysregulation (Schore, 2003a, 2003b). The more strategies we can give our clients for managing, and eventually resolving, their affect dysregulation, the more rapidly they can recover. Teaching them to use Switching to titrate intensity at home between sessions and to apply Release Points to ward off panic attacks provides relief and hope for the future. The recognition in OEI that clients can, and do, engage in active self-healing is consistent with Bohart's (2006) theory. He stressed that in all therapies clients operate on therapists' interventions to produce change. As early as possible in OEI treatment, once clients are sufficiently safe and stabilized, we encourage them to use the techniques at home. One woman in her mid-fifties had been suffering three to five panic attacks a week since she was five years old. In her first session she was shown how to use her Release Points (described below) and was ecstatic upon return in the second session. While previously powerless in the face of overwhelming affective and somatic intensity for 50 years, she was now able to regulate her affect and control these symptoms.

Peter Fonagy and his associates (Fonagy, Reflection on emotion. Target, Gergely, Allen, & Bateman, 2003) noted that one of the greatest deficiencies in emotional functioning of clients with borderline personality disorder was lack of "mentalizing" capacity. These people typically lack the ability to stand back from their own emotional states and reflect, rather than impulsively act out. An example of such an increase in mentalizing via OEI was reported by the coleader of a group for women with borderline personality disorder (BPD). In the pregroup meeting, a potential group member expressed anger based on nothing but the physical appearance of the leader, as she had never met the woman before. When this client was about to leave, the leader asked if she would try the simple Switching procedure. Out of one eye (i.e., with the other eye covered) the woman saw the leader as closely resembling her older sister, who had emotionally and physically abused her. Out of the other eye, the woman saw the leader as a kind, empathic individual. As she Switched several times, the perceptual distortion dissolved and she joined the group. She was able to detect, and dissolve, a perceptual distortion that she had projected onto one of the leaders. As a result she was able to remain in, and benefit from, the group. In the following group session, that same woman was able to recognize that she was having a negative transference reaction to the other leader. She initiated the OEI procedure herself and cleared the distortion. This single

technique reduced the time needed to establish group stabilization and trust with the two leaders by six months. It could also be applied in heterogeneous groups with considerable benefit. Members could detect and clear perceptual distortions with others who varied in age, gender, race, hair and eye color, presence of facial hair, and other physical characteristics. When clients experience one emotion or perception with one eye uncovered, and another with the other eye uncovered, part of them is called upon to stand back, 'observe,' and comment on, these differences. Mentalizing capacity is increased.

Transformation of emotions. Greenberg (2008) noted that emotions are transformed by the activation of alternate emotions (rather than cognitions) through experiential Emotion Focused Therapy (EFT). In Process-Experiential Psychotherapy [PEP; and Emotion-Focused Therapy for Trauma (EFTT); see Paivio & Pascual-Leone, 2010], one of the goals is to have clients access more adaptive emotions associated with relational traumas (i.e., moving from self-disgust, shame, and fear; to anger at perpetrators, and sadness associated with losses). OEI techniques can be used to speed such shifts, while respecting individual differences in ego strength. Using Switching to address intensity and perceptual distortions, major shifts in emotional reaction typically occur.

One of the most significant contributions of OEI to the psychotherapy integration enterprise is the discovery, adaptation, and development of a series of *intervention techniques*, with accompanying conceptualizations based on neurobiological and behavioral theories. These techniques are described later in this article, and the beginnings of neurobiological behavioral conceptualizations of OEI strategies are presented in the following section.

### **Theoretical Integration**

To supplement and extend the experiential and relational psychoanalytic theories addressed above, neurobiological and behavioral theories are introduced and integrated in this section. In clinically guided developments of OEI, tactics for innovation have often drawn upon extensions and elaborations of intervention strategies. Neurobiological and behavioral principles have been valuable for conceptualizing emerging directions and substantive developments.

R.B. became involved with OEI after A.C. had originated the three primary techniques (Switching, Sweeping, and Glitch Massaging). Early in his career he was trained in applied behavioral analysis, and he went on to complete postdoctoral training in neuropsychological assessment and psy-

chophysiological measurement. As a result, he has been able to bring neuropsychological and behavioral perspectives to OEI theory, which now incorporates these 'lenses,' along with attachment theories. R.B.¹ suggests plausible underlying neurobiological and behavioral mechanisms for OEI techniques in a list of theoretical tenets, below. In addition, after descriptions of each set of OEI techniques, he conceptualizes applications of these principles *during* OEI treatment. Finally, in one of the case examples at the end of the article, readers are provided with analysis of OEI theory and application "at ground level" (in the sense emphasized by Paul Wachtel, 2011).

### Neurobiological and Behavioral Components of OEI Theory

Rationales for neurologically based theories to guide psychotherapy are becoming increasingly clear through recent affective neuroscience research findings (e.g., Damasio, 1999, 2010; Gallese, Eagle, & Migone, 2007; Ledoux, 1998, 2002; Rothschild, 2000, 2006; Schore, 1994, 2003a, 2003b). Questions about the necessity (e.g., Greenberg) or unimportance (e.g., Gendlin) of verbal processing reemerge when considering the neurobiology of trauma. Bessel van der Kolk (2002a) provides an excellent overview of the larger question of the sufficiency of verbal therapies to address psychological trauma. During trauma triggering, blood flow is reduced to the left dorsolateral prefrontal cortex (Broca's area), making clear and coherent speech difficult (Rauch et al., 1996). In addition, most of the major symptoms of PTSD, including flashbacks, panic attacks, and dissociative experiences, originate in subcortical structures (limbic and paralimbic regions), which are not readily impacted by verbal processing. Beyond these neurobiological 'basics,' the following theoretical mechanisms are incorporated in OEI theory:

- Neuro-activation & microattunement during trauma processing;
- Classical conditioning of sensory, emotional, and cognitive responses;
- Incorporation of polyvagal theory, addressing all three levels of response;
- Coactivation of sympathetic and parasympathetic responses, & tonic immobility;
- Ocular proprioception, multisensory memory, & stimulated psychophysiological schemas.

<sup>&</sup>lt;sup>1</sup> Not wanting to inflict responsibility for such postulations upon his co-authors.

Neuro-activation & microattunement during trauma processing. It is important to realize that OEI techniques cannot be implemented mechanically in a "perfunctory" manner. In contrast, a very intuitive yet precise form of (a) 'neuro-activation' and (b) "microattunement" (NAMA) is applied dozens of times each session during OEI Glitch Massaging and Switching (described below). This is consistent with the contention by Goldfried and Davila (2005) that effective psychotherapy requires both (a) technique and (b) relationship.

As the therapist tracks to, and massages, glitches in eye movement, clients exhibit various facial expressions and somato-emotional reactions. As in other emotionally focused therapies (e.g., AEDP, EFTT, PEP, and Relational Psychoanalysis), mirror neuron systems in the therapist are activated during this intersubjective process (Gallese, Eagle, & Migone, 2007). There is strong activation in the premotor and parietal regions of the brain, and the therapist actually experiences the emotions and body sensations of the client, albeit at less intense levels (embodied simulation). Gallese and his colleagues note that this is "... a mandatory, nonconscious, and prereflexive mechanism that is not the result of a deliberate and conscious cognitive effort aimed at interpreting the intentions hidden in the overt behavior of others..." (p. 143).

They further describe the deeper relational psychotherapy process, as follows:

The therapist's attuned response to the patient, which is itself underpinned by the former's embodied simulation of the latter's emotional expressions, triggers in the patient an embodied simulation of the therapist's response. This process helps the patient "see" his or her emotional states in the therapist's response, as well as experience the modulation and containment of such states ... where the caregiver functions as "social biofeedback." ... The patient learns to more accurately identify his or her affective states through "observing" them as they are reflected in the therapist's attuned response (p. 160).

Attunement is necessary for developing secure attachment, particularly with clients who have disorganized (or "unresolved") attachment and dissociative symptoms as a result of severe early trauma, often experienced multigenerationally (Liotti, 2004, 2006; Lyons-Ruth, 2003). It is possible for therapists using OEI techniques to improve the quality of attunement. As the therapist *observes and reports* tiny perturbations in movement of a client's eyes and facial cues (while guiding the client's eyes), at the same time the client internally *experiences parallel shifts* in emotions, perceptions, and sensations, the client experiences "being seen" (in the most positive sense). Instead of being invisible and alone, clients report profound joining with therapists, along with integration of their emotions, perceptions, and sensations—in short, both *observed* and *experienced* integration (OEI) is occurring.

Classical conditioning of sensory, emotional, and cognitive responses. Sensory stimuli (sights, sounds, smells, somatic sensations, and tastes) can become classically conditioned to intense amygdalar activation and excitation of the hypothalamic-pituitary-adrenal axis (HPA; van der Kolk, 2001; Yehuda, 1997, 2002). In addition to external sensory discriminative stimuli ("triggers"), interoceptive cues such as shortness of breath, racing heartbeat, and lightheadedness can be linked to amygdaloid arousal (Barlow, Allen, & Basden, 2007). Finally, emotional states, and even cognitions, can acquire connections to any of these other types of responses via associative learning during amygdalar arousal. John Briere is particularly incisive in his analysis of (classically) Conditioned Emotional Responses (CERs) and is quick to point out that these are very prevalent in individuals who have had chronic, severe, and early onset abuse and neglect. These CERs can include negative emotions (fear, sadness, anger, and shame), expectations, assumptions, and interpersonal response sets. He describes the complexity of these associations:

Things are not always this simple—any given "trauma memory" is likely to encompass a collection of many separate and discrete memories of that traumatic event. Further, evocation of these memories (and associated CERs, which can themselves be considered memories of a sort) may trigger recollections of other traumas and other conditioned responses—leading to a highly complicated cascade of internal associations and activated states or experiences. In fact... thoughts and expectations also may be activated by trauma memories. Specifically, we suggest that—similar to CERs—triggered trauma memories may activate simple cognitive material (e.g., assumptions or expectations) that was encoded at the time of the event and became conditioned to the memory (see Olsen & Fazio, 2002, for a discussion of implicit, classically conditioned "attitudes"). Such activated cognitions do not necessarily represent "fear structures," because they do not inevitably produce fear (e.g., they may be associated with anger or shame) ... (Briere & Scott, 2006, p. 122).

It is important to clarify that OEI interventions do not simply apply principles of exposure and extinction. Rogers and Silver (2002) noted that during EMDR, clients receive very brief exposures to trauma-related material, interspersed with breaks. According to classical learning theory, extinction and habituation require prolonged (45 minute) exposures. Brief, intermittent exposure should (theoretically) make the problem worse by strengthening the (negatively) conditioned association. In fact, EMDR appears to result in more rapid reduction in subjectively reported levels of distress (Ironson, Freund, Strauss, & Williams, 2002). During OEI Switching, when clients present with intense states of affective and somatic distress, these (light) exposures of the eve most associated with intensity typically last only one to five seconds. In severe cases of dorsal vagal complex (DVC) activation (nausea, fainting, difficulty breathing), the exposures can last a half-second or less, followed by Switching to the other eye, with associated dissipation of arousal intensity. During a pilot OEI study (Bradshaw, McDonald, Austin, Grace, & Detwiler, 2011), participants in the treatment group participated in two sessions of

script-driven symptom provocation. Those in the delayed treatment control group received twice that number of provocation sessions, yet mean prepost differences in Clinician-Administered PTSD Scale scores were not significantly different. This finding suggests that it was NAMA initiated by OEI Switching, rather than simple exposure to trauma-related stimuli, that was the primary mechanism of change. In addition, the rapid time frame for response through NAMA also differentiates it from extinction and habitation. In the next section, a plausible mechanism for this quick response is introduced.

Incorporation of polyvagal theory, addressing all three levels of re-The neurobiological behavioral theory underlying OEI is consistent with a polyvagal perspective (Porges, 2007). According to polyvagal theory, human beings have three levels of neurobiological response that are hierarchically arranged. At the top of this chain is the ventral vagal complex (VVC). This system operates a "brake" mechanism. When the brake is "on," the viscera above the diaphragm (larynx, pharynx, bronchi, esophagus, and heart) are maintained in calm, comfortable states that facilitate social connection. When the brake is "off," the sympathetic nervous system (SNS-"fight or flight" response) is mobilized. If the SNS is ineffective in addressing the external or internal threat, the Dorsal Vagal Complex (DVC-"freeze" response) is triggered. The DVC has primary neural control of the visceral organs below the diaphragm (stomach and intestines) but also provides low tonic (slow, shallow) influences on the heart and bronchi. Hypoxia, or perceived losses of oxygen, are the main stimuli that trigger the DVC (Porges, 2001).

Stephen Porges (2007) summarizes additional highlights of polyvagal theory and suggests implications for psychotherapy. The relevance of this theory for OEI will quickly become apparent as the techniques are described and discussed below.

To effectively switch from defensive to social engagement strategies, the mammalian nervous system needs to perform two important processes: (1) to assess risk, and (2) if the environment is perceived as safe, to inhibit the more primitive limbic structures that control fight, flight, or freeze behaviors. . . . The term neuroception was introduced to emphasize a neural process, distinct from perception, that is capable of distinguishing environmental (and visceral) features that are safe, dangerous, or life threatening. In safe environments, autonomic state is adaptively regulated to dampen sympathetic activation and to protect the oxygen dependent central nervous system, and especially the cortex, from the metabolically conservative reactions of the dorsal vagal complex.... Neuroception might involve feature detectors in the temporal cortex ... since these structures respond to familiar voices and faces and hand movements and influence limbic reactivity. In most individuals (i.e., without a psychiatric disorder or neuropathology), the nervous system evaluates risk (i.e., neuroception) and matches neurophysiological state with the actual risk of the environment. When the environment is appraised as being safe, the defensive limbic structures are inhibited, enabling social engagement and calm visceral states. In contrast, some individuals experience a mismatch, and the nervous system appraises the environment as being dangerous, when it is safe. This mismatch results in physiological states that support fight, flight, or freeze behaviors, but not social engagement behaviors. According to the theory, social communication can be expressed efficiently through the social engagement system only when these defensive circuits are inhibited. Neuroception represents a neural process that enables mammals to engage in social behaviors by distinguishing safe from dangerous contexts. Neuroception is proposed as a plausible mechanism mediating both the expression and the disruption of positive social behavior, emotion regulation, and visceral homeostasis (p. 125).

Coactivation of sympathetic and parasympathetic responses, & tonic immobility. Babette Rothschild (2006) acknowledges Porges' polyvagal theory but maintains that "freeze" responses observed during trauma therapy are attributable to coactivation of sympathetic and parasympathetic branches of the autonomic nervous system (ANS) rather than to activation of the DVC. She notes that this would explain clinical observations of trauma clients who report *concurrent* hyperarousal and numbing. Gallup and Maser (1977) were among the first to summarize research on coactivation of SNS and PNS associated with tonic immobility in lower animals and parallels to catatonia as a human response to psychological trauma. More recently others have summarized evidence that the involuntary freeze response constitutes coactivation of SNS and PNS responses, with sympathetic activation predominating. Schore (2003a) noted that "... dissociation, at its first occurrence, is a consequence of a 'psychological shock' or high arousal . . . . Notice that in the traumatic state, and this may be of long duration, both the sympathetic energy-expending and parasympathetic energy-conserving components of the infant's developing ANS are hyperactivated" (p. 249). Moskowitz (2004) suggests that this is attributable to impairment of the connection between the right orbitofrontal cortex and premotor cortex during negative emotional stimulation, caused by activity in the amygdala. It appears that this state is characterized by autonomic instability, as evidenced in frequently changing pupil widths and sustained increases in pulse rate from 60-70 to 110-120 beats per minute despite almost complete lack of movement. Marx, Forsyth, and Lexington (2008) extend this discussion to research with survivors of sexual assault and childhood sexual abuse. Approximately half of the victims of childhood sexual abuse reported symptoms of tonic immobility. Between 35% and 40% of sexual assault victims reported significant immobility and 10% to 12% reported extreme immobility, typically accompanied by opioidmediated analgesia. Clinical observations of concurrent hyperarousal and numbing are described later in this article, under "core trauma symptoms." Whether these overwhelming states of arousal are attributable to mobilization of the sympathetic response, coactivation of the parasympathetic and sympathetic branches of the ANS, and/or reactions of the dorsal vagal complex, such extremely intense and complex experiences can undoubtedly result in behavioral conditioning of muscle activity.

Ocular proprioception, multisensory memory, & stimulated psychophysiological schemas. There is considerable evidence that we record what we see into our brains in very precise ways. Gregory (1997) cited a series of studies in which the direction-specific nature of nerve cells in the occipital cortices were discovered. Individual cells fire in response to eye movements which occur while tracking objects in particular directions (horizontally left-to-right or right-to-left, vertically up or down, diagonally, elliptically, proximally, or distally). Büttner-Ennever (2008) noted that torsional eye movements (concurrent with vertical or horizontal movement) emanate from a different area of the brain than simple vertical or horizontal eye movements.

Direction-selective neurons in the middle temporal visual area are crucially involved in motion perception. Neurons in the Lateral Interparietal (LIP) cortex integrate signals that originate in the extrastriate visual cortex. LIP neurons have visual receptive fields which are tied to retinal coordinates (Joseph, 2000). The inferior parietal lobule is multimodally responsive, with neurons that simultaneously receive somesthetic, auditory, visual, and movement-related input. Some neurons have visual receptive abilities to capture almost entire visual fields. The implications of these findings for OEI Glitch Massaging will be discussed later.

Proprioceptive receptors are nerve cells in muscles that send signals to the brain about muscle positioning. Such proprioceptors exist in large numbers and high densities in the six extraocular muscles that control the movements of each eve and in the muscles of the neck (Batini, Buisseret, Lasserre, & Toupet, 1985; Donaldson, 2000; Dutton, 2003). A specialized type of ocular muscle fibers has recently been discovered, known as "multiply innervated muscle fibers" (MIFs; Büttner-Ennever, 2006, 2008). These have palisade endings, suggesting they have proprioceptive functions. MIF motoneurons have been found next to the three main nuclei associated with eye movement (oculomotor, trochlear, and abducens). These respond to activation with relatively slow, graded contractions rather than the all-or-nothing twitch characteristic of single innervated muscle fibers (SIFs). During OEI Glitch Massaging we have noted these differences in speed and type of response. There are also intraocular muscles that control curvature and thickness of the lenses (for accommodation), and constriction and dilation of the pupils. Finally, there are extraocular muscles that elevate the eyelids (levator palpebrae superioris). Proprioceptive neurons send detailed information regarding the locations and movements of the eyes, positions of the eyelids, and relative constriction or relaxation of the intraocular muscles. In short, psychosensory schemata can organize somesthetic, auditory, visual, and movement-related associations into patterns associated with specific episodes or moments of experience.

During psychological traumas, patterns of external and internal stimuli organized in such schemata are typically stored in intractable forms (van der Kolk & Fisler, 1995). Evidently, this information can later be retrieved, reactivated in the extra- and intraocular muscles, and possibly remapped on the retinas or primary sensory cortex—in essence, reembodied. This process occurs when the brain is exposed to current or recalled visual images, emotions, sounds, or somatic sensations associated with particular traumas. Theoretically, the distance (from the eye) and direction of movement of the external stimulus, and the associated focusing and movement of the eyes are classically conditioned to states of amygdalar and HPA arousal. As clients recall those events, the locations, movements, and focal lengths of the eyes that have become associated with those events can be simultaneously accessed. Recollection of prior traumatic events can occur either inadvertently through unexpected external or internal sensory cues, or intentionally through multisensory imaginal visualization. Hypothetically, if a therapist can guide a client's eye(s) to the right distance and in the right direction for points in each visual field that have become associated with those overwhelming seconds or minutes during traumatic events, the associated multisensory intensity and numbing can be dissipated.

#### Systemic Relational Intervention

Moving from neurobiological to social levels of analysis, interpersonal features of OEI have been explored clinically and are being theoretically integrated. The systemic-relational nature of OEI treatment reflects the centrality of attachment processes and attunement in the heart of the model. As a marriage and family therapist, A.C. has always considered the impact of individual changes on larger social systems, including parentchild relationships, partner-partner dyads, and extended family units (involving aunts, uncles, cousins, and grandparents). Part of the reason A.C. gravitated toward incorporation of OEI work in family subsystems was that she had worked extensively with members of First Nations (aboriginal) communities, which are collectivistic in cultural orientation. Some of the simpler OEI techniques have been "organically" disseminated within family and community systems. Systems theory has been incorporated during OEI practice, as multiple individuals from the social worlds of clients have been invited to participate in relational interventions (see the Specialized Applications section below). Formal systems theory will be addressed in greater depth in future articles.

Discovery and Development in the Clinic Leads to Effective Application in the Clinic

OEI techniques were discovered and developed during more than 45,000 hours of psychotherapy. Although there have been sound rationales for attempting certain approaches and techniques, innovation has been greatly facilitated by case-based, in-session responsiveness to tiny changes in the appearance and behavior of clients. The reflective practices of experienced clinicians draw upon forms of understanding beyond those employed in traditional research paradigms (Polkinghorne, 1999, 2004). Aristotle's (McKeon, 1941) term *phronesis*, meaning "practical wisdom or knowledge," is discussed by both Miller (2009) and Polkinghorne to clarify relative advantages of information gained via clinical work, theorizing, and research. They both agree that there are reciprocal contributions between these spheres of influence, but that clinical wisdom has traditionally been undervalued:

The real essence of clinical knowledge is experiential and practical *know how*. Nonetheless, there is an important role for theory in communicating, in as concise a manner as is possible, the principles of clinical work. As with other theories, there is a kind of architecture to theory. At the foundation are philosophical assumptions, then the overarching broad principles or theories, followed by subtheories, and then minitheories. Observations are always expressed using concepts taken from the theory, and the further down the theoretical chain the better . . . Case studies . . . require us to revise the . . . theories . . . when the consequences of our actions are not consistent with what the theory would have led us to expect in a given clinical situation (Miller, 2009, p. 106).

In this article, for example, the broad principles or theories are provided up to this point in the article, the subtheories are offered in the next section (conceptualizations for each of the five families of OEI techniques), and minitheories are described in the 'Specialized Applications' section later in the article. These were developed through thousands of case examples like those provided at the end of the article. Polkinghorne addresses the reflective and responsive application of theoretical principles during clinical work:

Practical thinking normally operates beneath the level of cognitive awareness .... It is an incredibly complex form of thought and works without noticeable effort .... Within the fluid and dynamic therapeutic process, the characteristics of practical-thinking issues in judgments are provisional and exploratory rather than definitive and conclusive. Decisions are tentative and need to be altered or abandoned depending on the effects they produce. Practice activity proceeds through trial and error, constantly making adjustments that direct the progress toward a therapeutic goal .... Expertise in clinical judgment is related to how often a therapist's conjectures about what to do leads to the desired result (1999, p. 1432).

The clinical knowledge and skill imbedded in OEI has been accumulated one session and case at a time, a process elucidated by Polkinghorne (1999):

The purpose of the psychotherapist's training can be conceived in the development of an apperceptive mass that is sufficiently dense in the area of therapy to understand the shades of differences among therapeutic situations. Dense background knowledge of psychotherapy grants therapists experiences that are more nuanced and that include more finely tuned distinctions. Practical thinking, then, can make use of these just-noticeable differences in therapy situations to make decisions that are more likely to succeed in a particular situation. Therapists' own experiences contribute to increases in their apperceptive mass. Clients who do not quite fit into their available background categories can be the source of new categories (p. 1434).

In the same spirit, John and Helen Watkins encouraged greater emphasis on the development and discovery of interventions: "If psychoanalysis and psychodynamic therapies are to be improved we might look toward their therapeutic techniques and formats, rather than to their basic theory as a hopeful possibility of change" (Watkins & Watkins, 1997, p. 141; cf. also Fischer, 2003). Fisher and Ogden (2009) noted that:

Most approaches to psychotherapy lack the tools and intervention methods to address posttraumatic physiological alterations directly . . . . Experiential psychotherapies (see Fosha, Paivio, Gleiser, & Ford [Chapter 14] and Schwartz, Schwartz, & Galperin [Chapter 17], this volume) serve to help clients become more aware of the bodily changes associated with certain emotional states, but they do not facilitate the achievement of altered physiological responses. The absence of direct interventions to assist clients in regaining the ability to regulate bodily states that have been altered by traumatic stress disorders is a very significant omission. If these symptoms are not therapeutically addressed, the autonomic and physiological responses often maintain and exacerbate the psychological symptoms associated with both PTSD and complex traumatic stress disorders despite otherwise adequate treatment. To address body-based symptoms, in addition to the social-emotional and cognitive effects, a different approach to treatment may be helpful (pp. 312–313).

#### Demonstrated Effectiveness and Empirical Pragmatism

Conjecturing about the future of integrative approaches in psychotherapy, Goldfried, Glass, and Arnkoff (2011) stress the importance of demonstrated effectiveness for psychotherapeutic interventions: "In essence, empirical pragmatism, not theory, will be the integrative theme of the 21st century" (p. 289). In the development and evaluation of OEI procedures, investigation through randomized clinical trial (RCT) has begun, and initial results show effectiveness for reduction of posttraumatic stress disorder (PTSD) symptoms. The results of these projects have been presented at professional conferences and are being published (e.g., Bradshaw, McDonald, Austin et al., 2011; Bradshaw, McDonald, Williams et al., 2011). One of the greatest challenges facing trauma therapists today is treatment of more complex versions of PTSD, including clients who present with considerable dissociation (Steele, van der Hart, & Nijenhuis, 2005; van der Kolk, 2002b). In our analyses of psychophysiological data from the last RCT, three preliminary subtypes of PTSD were identifiable using quanti-

tative electroencephalography (qEEG; Bradshaw, McDonald, Swingle et al., 2011). Two thirds of the participants who responded to OEI had complex and/or dissociative forms of PTSD, suggesting that these techniques are not limited in applicability to clients with "simple" PTSD.

## DESCRIPTIONS OF OEI TECHNIQUES AND INTENDED APPLICATIONS

It is necessary to describe each set of OEI techniques and their intended purposes because these interventions have not been previously reported in the journal literature (cf. clinical and client handbooks: Bradshaw & Cook, 2007, 2011; Cook & Bradshaw, 1999, 2002). Many of the newer therapies mentioned earlier in this article that overlap the most theoretically with OEI depend on techniques that were introduced 50 years ago: Gestalt empty chair (now referred to as "imaginal confrontation") and dual chair exercises, which are now familiar enough to most readers that they don't require explanation.

There are five sets of OEI techniques:

- 1. Switching
- 2. Sweeping
- 3. Glitch Massaging
- 4. Glitch Holding with Bilateral Stimulation
- 5. Applying Release Points

Some of these were developed, and are now used, for very specific purposes. Others, such as Switching and Glitch Massaging, are used for many purposes and can be flexibly applied and combined with other treatments. In each case, after a family of techniques and its uses have been described, further suggestions regarding associated neurobiological and behavioral mechanisms are provided.

## **Switching**

The alternate complete monocular covering of the eyes is referred to as 'Switching.' We have found this cluster of techniques useful in clinical practice for (a) titration of traumatic intensity, (b) reduction of dissociative symptoms, and (c) detection and resolution of negative transference reactions.

## For Titration of 'Core Trauma Symptoms'

Most clients will start trauma processing by focusing on either traumatic material or on disturbing physical symptoms (pain, pressure, paresthesia, tension, etc.). Therapists working with psychological trauma have undoubtedly encountered what we refer to as 'core trauma symptoms,' so called because they are felt in the "core" or center of the body (throat, chest, stomach). These include the following: hyperventilation, chest tightness/temporary difficulty breathing, throat constriction, and nausea. These are often accompanied by one or more of the primary trauma-related emotions: (a) terror/horror/fear/anxiety, (b) despair/hopelessness/sadness, (c) rage/anger, or (d) shame/humiliation/embarrassment.

One of our first discoveries was that, for many clients, the intensity of these symptoms was changed considerably by having them simply cover one of their eyes with one of their hands. For a good number of clients, when they have their dominant eyes uncovered they experience *more* fear, or anxiety (see Hannaford, 1997, for a quick eye dominance assessment procedure). In contrast, clients experience *reductions* in symptom intensity when they *cover* the dominant eye. For many clients, the experiential discrepancy arising from Switching is itself profound and often serves to engage clients in the process. For some clients, often those with earlier and more profound abuse and neglect, there are simply *differences* in somatic and affective experience (rather than rapid reductions), depending on which eye is covered (e.g., "sad" vs. "mad").

#### For Reduction and Resolution of 'Dissociative Artifacts'

Often when intense affective and physical symptoms are being processed (i.e., briefly reexperienced), clients exhibit what we have come to refer to as "dissociative artifacts." These often include sensations *outside* the core of the body, most commonly headaches; numbness and tingling in the hands, face, or feet; light-headedness or drowsiness; and visual distortions (blurring, partial occlusion of portions of the visual field, or doublevision). Readers are referred to the OEI Web site (www.sightpsychology.com under "Resources") for a diagram contrasting core trauma symptoms and dissociative artifacts. Although both "dissociative artifacts" and "core trauma symptoms" are likely DVC responses that have been triggered, we distinguish between them in trauma processing, based on the subjective experiences of clients. The core trauma symptoms are typically associated with concurrent abreactive (panic, fear) and freeze (tonic immobility) responses, whereas the dissociative artifacts are experienced simply as

'numbing,' 'floating,' or 'spacing out.' For some time it has been recognized that those who dissociate during trauma are more likely to develop PTSD than those who do not (Bremner et al., 1992; Classen, Koopman, & Spiegel, 1993; Shalev, Peri, Canetti, & Schreiber, 1996). In fact, Ozer, Weiss, Best, and Lipsey (2003) in their meta-analysis, concluded that peritraumatic dissociation was the most pronounced risk factor for later development of PTSD.

Fisher and Ogden (2009) comment on the importance of what we have referred to as "core trauma symptoms" and "dissociative artifacts":

Traditional treatments of traumatic disorders are often complicated by the wide variety of disturbances in sensation, perception, and movement typically reported by individuals with traumatic stress disorders, symptoms that often prove baffling to clinicians and medical professionals and disorganizing for their patients (McFarlane, 1996). Among these disturbances are those that involve reliving/reexperiencing (e.g., pain and sensory distortions), unbidden movements, autonomic responses (e.g., rapid heart rate, constricted breathing, and muscle tension), and symptoms related to numbing and avoidance (e.g., anesthesia and analgesia), disconnection from one's body (depersonalization), and loss of pain perception (termed somatoform dissociation; Steele & van der Hart, Chapter 7, this volume), all of which can further aggravate the dysregulated emotions and distorted bodyand self-concepts typical of traumatic stress disorders (p. 313).

We (A.C. and R.B.) discovered that when clients were asked to shift their attention *off* the traumatic material and *onto* these dissociative artifacts, they experienced differences in the location, sensation, and intensity of such 'side effects,' depending on which eye was covered. A client, for example, might indicate that a sharp, piercing pain was felt over the left eyebrow, with an intensity of eight (out of a possible 10) with one eye covered. After Switching to cover the other eye, the sensory experience might be reported as a sensation of numbness at the back of the head, with an intensity of three out of 10. Usually, as clients continue to Switch (alternate the eye covered) while focusing on these physical sensations or visual distortions, these disturbing "artifacts" dissipate. In some cases, resolution of these symptoms requires the application of one or more of the other OEI techniques described later.

#### For Detection and Resolution of Negative Transference Reactions

A large body of research supports the centrality of the therapeutic alliance in determining psychotherapy effectiveness (Horvath, 2006; Norcross, 2002; Obegi, 2008). Any barriers or distortions that impair this bond may substantially interfere with treatment outcome. While working with clients using Switching to resolve core trauma symptoms and dissociative artifacts, we (A.C. and R.B.) began to notice that clients were exhibiting

different responses to us as therapists, depending on which of their eyes was covered. When we made inquiries, it became apparent that many clients actually perceived our faces differently as they Switched. These were not just metaphorical or emotional shifts but, rather, involved major changes in the appearance of the therapist's face. Some of these involved apparent distances from the therapist (six inches away with one eye covered vs. six feet away with the other eye covered). Others involved changes in physical appearance of the therapist (looks like a mean, white-haired old man on one side, generating fear in the client; and looks like a kind, middle-aged, dark-haired man with the other eye covered). Some of these shifts are extreme, to the point where the therapist appears to have no face, or has a huge head and small body with one eye covered, but looks normal with the other eye covered. The encouraging discovery was that if a client repeatedly Switched (alternated the eye that was covered), while looking at the therapist (or partner, or child, or even his or her image in a mirror), the perceptual distortions dissolved. This has been extremely helpful for us as therapists and can be easily and quickly applied by psychotherapists practicing according to any therapy model. Examples are provided later in this article of how we have applied this process to specific clinical populations and problems.

## Neurobiological Behavioral Conceptualization

Rationales for Switching are quite involved, because this set of techniques has multiple uses and effects. To facilitate comprehension, paragraph subheadings have been added in this subsection.

Predominant involvement of right hemisphere with emotional activation. Rauch et al. (1996) measured changes in regional Cerebral Blood Flow (rCBF) in PTSD patients between resting (nontriggered) states and states in which they were "triggered" by recorded readings of individualized scripts of previous traumas they had encountered (i.e., script-driven symptom provocation). Brain scans during these triggered states revealed marked lateralization of activity in the right hemisphere (limbic, paralimbic, and visual cortex), along with decreases in rCBF in the left inferior frontal (Broca's) area and the middle temporal cortex. Using EEG during recall of traumatic memories by PTSD patients, Schiffer and his associates (Schiffer, Teicher, & Papanicoloau, 1995; Schiffer, 1997) also found a marked laterality in favor of the right hemisphere and concomitant diminished left hemispheric functioning.

Interestingly, when the same traumatized patients were given *neutral* memory tasks there was *enhanced* left cortical activity (patients in the

control group showed no significant laterality during the recall of distressing memories). These results support the speculation that one of the roles of the left frontal lobe is to mediate or inhibit the activity of the right frontal lobe and right-sided limbic structures (particularly the amygdala). Schiffer and his colleagues suggested that the hemispheres function more autonomously (i.e., in a less synchronized fashion) in patients with childhood abuse. The preponderance of right-sided brain findings during activation of posttraumatic states is consistent with the literature supporting the preferential role of the right hemisphere in evaluating the emotional significance of incoming information. It is also consistent with the role of the right hemisphere in anxiety, panic, and phobic disorders.

Dissociative versus abreactive responses to triggering. to note that, when triggered by trauma reminders, all people do not experience sympathetic arousal ("fight or flight") responses. Approximately 30% go instead into a dissociative ("freeze") response (Hopper, Frewen, van der Kolk, & Lanius, 2007; Lanius et al., 2003), and this appears most likely in those with traumatic childhoods (Lanius, Hopper, & Menon, 2003). I (R.B.) suggest that such immediate triggering into DVC states may well reflect reinforcement history. As children, these people attempted to resolve the threats of abusers using social connection. When this did not work, their bodies lifted the vagal brake to mobilize the fight or flight response. When even this strategy was not effective, their bodies resorted to the freeze response. In the future when presented with similar threats (or associated discriminative stimuli), these individuals will be progressively more likely to skip VVC and SNS strategies and move directly into DVC states. This pattern is important clinically, because clients who initially present with hypoarousal (i.e., "numbed out" states associated with DVC triggering) will often experience activation of hyperarousal states (associated with SNS mobilization) after application of OEI techniques. This a positive sequence, because these individuals cannot directly heal from traumas while in psychologically "frozen" states.

Association of hemispheric activation with lateral visual fields. Schiffer (1996) reviewed the cognitive functions of the right hemisphere and provided implications for psychological functioning. He later developed a theory of hemispherically associated "personalities," with suggestions for treatment of PTSD and other disorders (Schiffer, 2000). Schiffer, Anderson, and Teicher (1999) found that changes in affect, ear temperature, and EEG patterns could be induced by alternating light stimulation of the left and right eyes (i.e., lateral visual fields). He and his associates also found that such visual field stimulation activated contralateral extrastriate cortices (Schiffer et al., 2004). During clinical experience with OEI Switching, it has been found that higher affective intensity is not always associated with either the right eye or left eye but

rather depends on the eye dominance of individual clients. In most clients, when the dominant eye is open, greater intensity will be experienced. Schiffer and his associates, as well, found that there were individual differences in terms of which eye would stimulate higher affective intensity when exposed to light (although they did not, to our knowledge, link this with eye dominance). They used these observable differences in response to left- or right-taped glasses to successfully predict clinical response to transcranial magnetic stimulation for depression (Schiffer, Stinchfield, & Pascual-Leone, 2002).

Each eye has connections to both hemispheres. Most of the macular and nasal fibers of the optic nerves and tracts run contralaterally, while the temporal fibers run ipsilaterally. It is uncertain why we observe many of the same changes in level and type of affect and "personality states" using monocular covering during OEI that Schiffer and his colleagues observed when exposing only the lateral visual fields to light. This is an area for future investigation; however, it is not hard to understand the observed connections between light exposure of the eyes and shifts in affective state, because the visual pathway passes directly over and through the limbic system which includes the lateral geniculate bodies of the thalami, the hippocampal-dentate complexes, and the amydalae.

The importance of orbitofrontal cortices for affect regulation. The visual pathway also passes under the orbitofrontal cortices (OFC) and the anterior cingulate cortices (ACC). The OFC is particularly important for affect regulation. One of the functions of these structures (particularly the right) is to moderate the intensity of amygdalar responses. Another function is to coordinate the reciprocal methods of autonomic control (SNS and PNS). In PTSD these undergo increasing separation so that "... in trauma, sympathetic hyperarousal is suddenly followed by hyperparasympathetic dissociation" (Schore, 2003a, p. 214). These alternating states during trauma therapy are illustrated in a case example at the end of this article. It is possible that OEI treatment, which involves the eyes, directly effects affect regulation through changes in the OFC.

Anatomical proximity: OFC to eyes and amygdala, and olfactory bulbs to amygdala. The anatomical proximity of the OFC to the eyes and the amygdala is clearly adaptive for quick response patterns to survival threat, as is the short distance between the olfactory bulbs and the amygdalae. Regarding the sense of smell, for example, visual, auditory, somesthetic, and gustatory stimuli are processed first through the thalamus; whereas, olfaction is processed directly through the amygdala (Schoenbaum, Chiba, & Gallagher, 1999; Buchanan, Tranel, & Adolphs, 2003). It has been shown that the human amygdala is directly involved in the emotional processing of olfactory stimuli. Emotional intensity can be more clearly associated with the sense of smell than with the modalities of sight, hearing, touch, or

taste (Savic, 2005). Negatively associated smells can trigger traumatic memories and emotional states, and positively associated smells can activate pleasant emotions and calm states (Royet et al., 2000). In OEI we use both of these associative connections: Some smells can help clients activate into certain states or alters to titrate associated negative affect and physical arousal. Other fragrances (typically floral or citrus blends) are used to promote shifts *out of* dissociated or disturbing states, and *in to* relaxed and grounded states, during sessions.

Neurobiology of transference reactions. We now turn to the transference reactions observed during OEI Switching: Behaviorally, these occur because certain characteristics of certain individuals in clients' histories have been operantly and classically conditioned to intense negative physical and emotional states. When the facial features, tones of voice, or odors of such harmful individuals are encountered later, they trigger negative reactions in clients.

Duquette (2010) provided an insightful integration of attachment, affect regulation, and therapy relationship literature. In her review, she noted some leading areas of basic neurobiological research associated with discovery of how individuals separate their implicit experiences rooted in the past from their present day perceptions and reactions. Schnider and his colleagues have performed neurological research to determine which areas and processes are active, as the brain separates the past from current reality (Schnider, 2008; Schnider, Treyer, & Buck, 2000; Schnider, Valenza, Morand, & Michel, 2002). In particular, the posterior medial orbitofrontal cortex is involved in actively suppressing irrelevant material from memory to keep it from interfering with current reality. The authors note that monkeys with ablations of this area show severe deficits in extinction. They continue to engage in behaviors that are no longer rewarded and fail to adapt to new realities in their environments. This certainly seems to parallel human behavior in those with histories of abuse or abandonment, who continue perceiving and reacting to others in their environments according to historical rather than current information—the essence of negative transference reactions. Schore (2003b), who has researched neuropsychological concomitants of attachment behaviors in infants and children, agrees:

A study by Schnider and Ptak suggested that orbitofrontal dysfunction is associated with "a failure to distinguish between currently relevant and previously encountered information; that is between 'now' and the past" (1999, p. 680). This characterization is strikingly similar to a transference distortion, which I have previously characterized as a right brain phenomenon (p. 214).

We are currently engaged in a pilot study of cortical activity in response to triggering and nontriggering faces, with left and right eyes covered. Brain activity localization is assessed using Low Resolution Brain

Electrical Tomography (LORETA) with Quantitative Encephalography (qEEG), and later with Magnetoencephalography (MEG). Comparisons are made between pre- and posttreatment (after 90 minutes of OEI) cortical activation in response to triggering faces in photographs and video clips.

### **Sweeping**

A.C. had been working with severe, multigenerational trauma survivors for many years, and one of the most common initial presenting symptoms was physical pain (often headaches). Because many of these clients had concurrent substance addictions, they could not access some of the more potent analgesic medications. For this reason, she would often spend time each session using Switching and other OEI procedures to reduce or clear these somatic complaints. At times, Switching would bring down the intensity of physical symptoms, to the point where the subjective disturbance was equal, regardless of which eve was covered, but it was still at a Subjective Units of Distress (SUD) level of three of 10 or higher. In such cases, A.C. discovered that having clients cover one eye while she used a visual stimulus to guide one of their eyes from the lateral visual field to the midline could significantly relieve these symptoms. This procedure is done at the client's eye level, usually 9 to 12 in. from the side of the head. The therapist starts with her fingers (or pencil, or wand) by the client's ear and arcs around the client's face (to the other side of the client's nose). This process is repeated (alternating once on each side for 10 to 12 repetitions) until the somatic or visual symptoms have dissipated sufficiently that they no longer distract clients from their trauma processing. In addition to headaches, this procedure can be used in sessions to reduce or clear dizziness, drowsiness, and visual artifacts (blurred vision, etc.).

## Neurobiological Conceptualization

As with Switching, there are a number of likely neurobiological mechanisms worth considering, some of which are listed in this section, and some of which are described later under "Glitch Holding with Bilateral Stimulation." It is likely that more than one of these phenomena are involved, some of which may be primary and some secondary (in both importance and temporal sequence).

Smooth pursuit eye movements, reflexive saccades, and pontogeniculooccipital (PGO) waves. Sweeping involves smooth pursuit eye movements, which are different from reflexive saccades (Büttner & Büttner-Ennever, 2006). It is likely that these relatively rapid Sweeping movements across each visual field have neuropsychological mechanisms similar to EMDR. Stickgold (2002) postulated that the primary mechanism of EMDR was likely:

... a pattern of alternating, bilateral stimulation that forces subjects to shift their attention across the midline. It is this orienting response that we propose induces a REM-like state, facilitating cortical integration of traumatic memories .... This reorienting of attention requires first a release of focus from one location in visual space, then its shift to a new location, and finally its refocusing on this new location (pp. 70-71).

He suggests that such repetitive reorientation of attention from one location to another produces shifts in regional brain activation and neuromodulation by pontogeniculooccipital (PGO) waves similar to those associated with REM sleep. Among the regions involved in that process are the anterior cingulate and the superior colliculi (associated with eye and head movement feedback and control, and orientation in three-dimensional space). He notes that this REM-like state "permits the integration of traumatic memories into associative cortical networks without interference from hippocampally mediated episodic recall" (p. 71). Non-REM sleep has been found to be most important for strengthening hippocampal memories, and REM sleep is most important for neocortical memories (particularly of negative emotionally associated events which significantly involve the limbic and sensory structures in the brain). Information flows out of the hippocampus and into the cortex during non-REM sleep, and the flow is reversed during REM sleep. It has been suggested that rapid bilateral visual, auditory, or tactile stimulation can simulate REM sleep, promoting the flow of cortically stored information back through the hippocampus (for corrective reconsolidation), during which links to high levels of somatic and affective intensity are reduced, and new associative links can facilitate understanding regarding the meaning of events. Stickgold stated that alternating (bilateral) stimulation therapy can work even better than REM sleep because norepinephrine arousal can be contained through careful application of the therapy.

Resetting rhythms in pacemaker cells and activation of the lateral cerebellum. Bergmann (1998) proposed that bilateral brain stimulation results in the resetting of pacemaker cells in the septum, from theta (the usual waking rhythm) to delta rhythm, which may increase synchronization of the hemispheres and improve functional connectivity. He further suggested (Bergmann, 2000) that bilateral stimulation activates the dentate nuclei in the lateral cerebellum. He stressed the significance of cerebellar involve-

ment in bilateral processing. This structure receives input from, and is activated by, every sensory system including vestibular, proprioceptive, visual, auditory, tactile, and somatosensory. Activation of the lateral cerebellum, in turn, has been shown to facilitate activation of the ventrolateral and central-lateral thalamic nuclei, which leads to activation of the left dorsolateral prefrontal cortex. There is evidence that the ventrolateral thalamus is involved in cognitive and language functions, in addition to motor activity. Bergmann (2008) noted that neuroimaging studies of individuals with PTSD reveal consistent decreases in thalamic activity (particularly ventrolateral and central-lateral nuclei), relative to non-PTSD controls. He suggested that bilateral stimulation would increase thalamic activation in those regions, facilitating repair and integration of cognitive, frontal lobe, memory-related, and somatosensory functions, and improve hemispheric synchronization. These and other neurobiological findings and theoretical models are reviewed in some detail in Bergmann's (2010) 20-year survey of attempts to assess and determine the underlying mechanisms of action for bilateral stimulation.

## Clinical Reduction of Alexithymia, Somatoform Dissociation, and Artifacts of Trauma Processing

In thousands of hours of clinical application, OEI Switching for artifacts, and Sweeping, have been found to facilitate reduction of dissociation (mostly likely, symptoms of DVC activation). This is an important contribution, because many trauma survivors with complex PTSD and/or dissociative disorders suffer from alexithymia (Frewen et al., 2008) and/or somatoform dissociation (Nijenhuis, 2004). I (R.B.) recall a client with Dissociative Identity Disorder (DID) exclaiming, about two years into therapy, that she had "felt the wind on her skin and through her hair for the first time she could remember." When extremely intense, negative physical and emotional experiences are encountered very early in childhood, people are forced to emotionally and physically "numb out" to survive. Such increased somatosensory awareness after bilateral processing may be attributable to increased activation of thalamic (sensory) nuclei. Van der Kolk (2006) comments on decreased activation of the medial prefrontal cortex (mPFC) observed in neuroimaging studies of people with PTSD. The mPFC is comprised of the anterior cingulate cortices (ACC) and the medial parts of the orbitofrontal cortices. He suggests that "dysfunction of the mPFC is likely to contribute to the arousal dysregulation in PTSD. The fact that the mPFC can directly influence emotional arousal has enormous clinical significance, since it suggests that activation of interoceptive awareness can enhance control over emotions" (p. 287). The NAMA process of OEI, repeated dozens of times during each psychotherapy session, undoubtedly contributes to increased somatosensory and affective awareness in clients.

#### **Glitch Massaging**

Without doubt, the most complex and difficult to master of the sets of OEI techniques is what we call Glitch Massaging. A glitch is a hold, hesitation, skip, or spontaneous redirection of the eye(s) in the process of tracking a visual stimulus.

#### Glitch Tracking

This is the observational process by which glitches are identified; for example, if a therapist is guiding a client's left eye diagonally from the lower right quadrant to the upper left quadrant and the client's eye, rather than moving smoothly along that diagonal, skips toward the lower left corner of the eye (blinking at the same time) that aberration in movement is referred to as a glitch. The process of using a visual stimulus to guide a client's eye(s) with the intent of *locating* these glitches is referred to as 'tracking.'

#### Glitch Massaging

A.C. had begun to track through the visual fields of her client's eyes to identify these perturbations early in the development of OEI. Some clients experienced increased physical or emotional intensity as she directed their eyes over these points, while the intensity of others dissipated. She adjusted her use of the procedure depending on the responses and needs of her clients. Some were so dissociated from their experiences that they benefited from the activation of emotions or physical sensations into awareness. Others *began* with intense affective or somatic experiences and were relieved, as this process dissipated the associated intensity. We refer to the guiding of a client's eyes (using a visual stimulus) into, over, or through, one or more of these glitches as "massage." We have observed many different types of glitches and

<sup>&</sup>lt;sup>2</sup> The authors wish to credit massage therapist Lene Tonnisen with the improvement of Glitch Massage movements to parallel the convex surface of the eye (i.e., arcing hand movements to reduce eye strain).

have applied a wide variety of Glitch Massage movements (vertical, horizontal, diagonal, and elliptical on any given plane parallel to the surface of the eye; and also proximally and distally—toward and away from—the surface of the eye).<sup>3</sup> With training and supervision, therapists become extremely skilled at identifying these glitches and reading the corresponding nonverbal and paraverbal responses in clients' faces and bodies. As these observations are shared with clients on a minute-byminute basis, greatly increased attunement results when therapists apply these techniques skillfully.

#### Tracking-to-Target

One way to identify glitches is for the therapist to guide the client's eye(s) with a visual stimulus until a glitch is observed by the therapist. Another way that A.C. discovered involves what we refer to as 'tracking-to-target.' With this approach, the client is asked to inform the therapist when the disturbing symptom is most intense. In other words, the client's subjective experience is used to guide the location(s) for massage instead of (or in addition to) the therapist's objective observations. Observed and experienced integration (OEI) is the goal. This approach can be used to resolve specific physical pains and paresthesias, speech impairments, disturbing (posttraumatic) inner voices, and visual distortions. If a client is disturbed by a caustic inner voice that constantly rails derogatory comments, for example, the client is instructed to "... Let me (the therapist) know when that voice gets the loudest, the most believable, or the most disturbing." At the point along the visual stimulus path where the client identifies such increases, the therapist can massage the associated glitches, providing significant relief. Typically in a case like this, the internal voice would fade in volume and/or the words would become unintelligible (and therefore become less disturbing to the client).

### Neurobiological Behavioral Conceptualization

To organize the complexity of Glitch Massaging processes, a number of additional paragraph headings have been provided.

<sup>&</sup>lt;sup>3</sup> The authors wish to credit OEI trainer and neurotherapist Michael Mariano with the innovation of proximal and distal Glitch Massage movements, either alone or in combination with vertical, horizontal, or diagonal movements.

Classical conditioning of eye movements, blinks, and pupillary dilation & constriction. Eye movements can be classically conditioned to states of amygdaloid and HPA arousal (unconditioned stimuli), and probably also to discriminative stimuli that immediately precede, co-occur with, or follow, painful or overwhelming events. These include all the types of cues mentioned earlier in this article relative to OEI theory (external sensory stimuli, interoceptive sensations, and emotional responses). Eyeblinks can be classically conditioned to traumatic stimuli (Neufeld & Mintz, 2001): "Amygdala-mediated emotional conditioning facilitates the subsequent acquisition of cerebellum-mediated motor responses" (p. 112). Pupillary dilation and constriction can also be conditioned (Ashe, 1978).

Almost any time a glitch is encountered during OEI Glitch Tracking or Massaging, an eyeblink is observed, and when glitches are titrated and intensity is dissipated, eyeblinks occur. It has been reported that eyeblinks each result in neuronal shutdowns in areas of the parietal and occipital cortices lasting 100 to 150 ms (Bristow, Haynes, Sylvester, Frith, & Rees, 2005). Future researchers can explore ways that such disruptions in neuronal functioning in those regions may facilitate de-coupling of somatoaffective intensity from other memory components, contributing to resolution and integration of traumatic memories. What we refer to as glitches, which manifest temporarily in sessions, have been reported by Büttner and Büttner-Ennever (2006) as "blips" (transient torsional eye deviations during voluntary saccades), attributable to permanent lesions. While the level of permanence differs, perhaps the brain locations associated with the blips they observed may be shared (posterior cerebellum and dorsolateral medulla oblongata).

Proximal and distal massage can result in particularly profound changes in client experiences. This involves guided movements of the client's eyes by therapists, using the therapist's hands, fingers, face, or body as the visual target, moving toward or away from the client's eyes. During this process, several intraocular phenomena occur: (a) pupils are constricted (via sphincter muscles) as objects move nearer to the eyes, and dilated (via radial muscles) as they move away; (b) the ciliary muscles are contracted as objects move nearer to the eyes (causing the lenses to become curved), and relaxed as they move away (causing the lenses to flatten); and (c) the eyes converge as objects move nearer to the eyes, and diverge as they move away—likely involving multiply innervated muscle fibers (MIFs; Büttner-Ennever, 2006). Each of these sets of muscles has proprioceptive neurons that can relay to the brain the levels of muscle contraction/relaxation, constriction/dilation, and convergence/divergence that were present at split-seconds of time when painful or overwhelming events occurred. As clients focus on those events via visual imagery, or somato-affective states, it appears that at particular distances from their

eyes, selective symptoms or responses manifest. To give readers an idea of the types and magnitudes of these responses, several brief examples are provided.

### Clinical Applications of Proximal-Distal Glitch Massage

It is not unusual for clients who have been traumatized to suddenly have their eyelids droop (or close) as the therapist's hand (or face or body) reaches a certain distance from the client's eyes. This is often accompanied by intense drowsiness, or a sensation of 'numbing out,' leading us to think of this as a dissociative response which is likely associated with a point of intensity. Quite a number of phenomena occur when visual stimuli reach distances from the eyes of clients that are associated with prior traumas. We (A.C. and R.B.) were treating a woman who had been struck by a motor vehicle, as a pedestrian. During treatment, we had her assume the body posture she had been in following the accident (sitting, turned to one side, on the ground). This helped activate the posturally related proprioceptive recall of the event. As the visual stimulus of the therapist's hand was moved progressively further from her eyes (starting at one foot away and moving to nine feet away), her eyes involuntarily blinked every 1.5 to 2.5 feet during the distance covered. When asked about this later, she said there had been concentric rings of people around her, and she had been "seeing" (in her mind) the people in those rings during those moments of shock and trauma as we had moved away from her eyes.

A different woman had been hospitalized in a body cast as a young child. Because the event was so physically anchored, the psychotherapist engaged in cotherapy with a body therapist. At one point when the therapist did a "distal pull" (using her hand as the visual focus as she walked backward away from the client's eyes), the client burst into tears when the therapist reached a certain distance away. The sobbing continued, as she abreacted the sadness and sense of abandonment she had felt as a young hospitalized child unable to move. She later reported that the distance where the release of emotions had occurred corresponded to the distance from her hospital bed to the doorway of the room, where her parents disappeared around the corner each time they left her in the hospital after visiting hours. After this therapy experience, the woman's adult relationship with her husband improved. While she previously had a preoccupied attachment with her spouse (concern about being abandoned, checking in with phone messages, etc.), this was relaxed and she was much more secure.

One final clinical example constitutes a particularly profound experience of proximal-distal trauma titration with OEI Glitch Massaging: While I (R.B.) was engaging in a 'distal pull,' the client's eyes suddenly widened, and she looked puzzled. I was about eight feet away from her, and she said, "You just disappeared!" (i.e., she saw the space where I had been standing without me in the picture). I moved forward a foot, backward a foot, and two feet to each side, and she could see me, but not at that distance straight ahead. She said later that it made perfect sense because she had been severely assaulted, and her male assailant had leapt at her from that distance. Evidently, her brain simply couldn't allow her to perceive me in the physical location that had led to such pain and fear. Such visual-perceptual distortions are dissolved by repeatedly going to the edges of the places where distortion (or somatoemotional intensity) starts, and then guiding the eyes back into the regions clear of distortion and/or intensity.

Multisensory manifestation of traumatic memories during activation of psychophysiological schemas. As mentioned earlier, many nerve cells in the inferior parietal lobules have visual-receptive properties which encompass almost an entire visual field, and they are multimodally responsive. Single neurons can simultaneously receive highly processed somesthetic, visual, auditory, and movement-related input (Joseph, 2000). These observations offer plausible models of how and why, when certain glitches are activated with OEI tracking and massaging, clients reexperience events in multisensory ways. Examples of how specific these visual recollections can be are provided in the following case material (from R.B.).

# Clinical Examples of Multisensory Glitch Activation

A victim of a bank robbery had been unable to sleep for several days since an incident. I asked him to hold his head still, and then point with his finger to where the gunman was when the gun went off (i.e., moving his eyes to where they were at that time). As I tracked through his visual field for glitches in eye movement, I located a major halting point. As I passed his eye over it, he experienced most of the multisensory intensity that had occurred at the time (sound of the gun, smell of gunpowder, extreme fear and panic states, physical shaking, halting breath, and an intense startle response). The glitch corresponded precisely to the place his eyes had been earlier when he had indicated where the gunman was standing.

A similar example was a client who had received a cell phone call informing him that his best friend had just been killed. Again, the location of his eyes at the time of the call was associated with triggering of the same

multisensory intensity. Another case is a demonstration of the same connection but in the reverse direction. This time, the client was processing a series of attacks by dogs (which understandably had created an intense phobia of dogs that had plagued her for many years). As I guided her eyes slowly in a number of directions, I encountered a series of these glitches. Each one was associated with a very circumscribed series of movements and facial expressions, identifiably connected with specific moments in the attacks (some on her head, some attacking her legs while she was on a bicycle, and others from behind while she was running away). As I massaged the glitches, these precisely circumscribed movement sequences resolved (along with the concomitant distressing emotions).

Still another case involved visual, olfactory, and auditory senses together. A client had been in a high school shooting incident 45 years earlier. As she vividly recalled the experience during OEI, she smelled the gun powder, saw the blood, and "heard" the moans of her wounded and dying friends. In the case of a different woman, involving a combination of auditory and somesthetic senses, I was working toward resolution of a negative cognition, or "inner voice" associated with beliefs (and related emotions). The client worried that she would never finish her academic program, or never amount to anything. As we Tracked-to-Target on that discouraging inner statement, her shoulder started to twitch. She was initially unable to explain the connection between the statement and her physical reaction, but as we proceeded with OEI she realized the source: As a child, her father had jabbed his finger into the region between her chest and shoulder, while saying (with disgust and anger) "You'll never amount to anything!" As we resolved the issue with OEI, both the intensity and believability of the cognition, and the related physical sensations and emotions dissipated.

### Indicators of Neurobiological Integration

Research findings and clinical observations indicate that trauma-related symptoms of many kinds are reduced during and following OEI; however, the neuropsychological concomitants of such "integration" are unclear. There are a good number of promising correlates to explore, including qEEG indicators of trauma-related symptomatology. Richard Davidson and his colleagues have documented frontal asymmetries associated with depression (Davidson, 1995), Metzger and her associates have reported parietal asymmetries associated with PTSD arousal and depressive symptoms (Metzger et al., 2004), and Liotti and Tucker (1995) discussed *vertical integration* of emotional processing, involving (a) midbrain limbic structures, (b) the cingulate, and (c) the cerebral cortices.

Paul Swingle (2008, 2009) identified a number of trauma-related *signatures*. Low theta/beta ratios in the occiput are associated with low distress tolerance, sleep difficulties, and agitated depressive states, which often predispose clients to addictions. High gamma/hibeta ratios over the anterior cingulate are associated with worry, rumination, and obsessive—compulsive tendencies, and alpha suppressions (lack of significant increases in alpha, from eyes open to eyes closed) at Cz and O1 are classic trauma markers.

Peniston and his associates reported that frontal and parieto-occipital brain regions in Vietnam veterans with comorbid PTSD and addictions showed decreased synchrony when they were repressing traumatic material (i.e., before they had abreacted or reprocessed the traumas), but these regions were found to be in greater synchrony after traumatic memories had been "relived" (Peniston, Morrinan, Deming, & Kulkosky, 1993). Such synchrony holds promise for assessment of psychotherapeutic integration of posttraumatic material. Likewise, with Brownback and Mason's (1999) EEG protocol for developing attentional flexibility in clients with DID. In this case, integration is the ability to volitionally shift into four different brain states: (a) conscious affective connection to buried traumatic material, (b) emotional self-comforting after abreaction, (c) somatosensory self-quieting, and (d) externally focused cognitive processing of the same material. In future, fMRI and MEG-related indicators of integration will likely be discovered and used to evaluate posttraumatic recovery and other psychotherapeutic recovery.

### Glitch Holding With Bilateral Stimulation

Some clients, as their eyes are guided through their visual fields with both eyes open, will experience double-vision. From the therapist's perspective, this looks like either the client is cross-eyed or one eye is fixed on a stimulus while the other is "wandering." Although similar in appearance at times, these fleeting transient symptoms are *not* the same as permanent strabismus or nystagmus symptoms. This "visual splitting" (as we have referred to it) during OEI Tracking is a relatively rare phenomenon, but it is profound to observe. If the therapist holds the visual stimulus in the location where visual splitting occurs, and the client applies bilateral stimulation (audio sounds, or alternately touching his or her left and right shoulders) this splitting resolves. The phenomenon appears to be an extreme, albeit brief, dissociative visual response. Identification and clearance of such experiences can be further enhanced if the client is standing on a balance board. This same technique can also be used at any point where the client experiences somatoaffective intensity.

Clients with a good deal of *ego strength* (affect regulation capacity) can self-administer this technique using their own affective and somatic responses to guide them. A.C. discovered both *objectively* and *subjectively* administered versions of this technique and demonstrated them to clinicians at a 1999 EMDR International Association conference in Las Vegas.

## Neurobiological Behavioral Conceptualization

The first part of this procedure, OEI Tracking to identify glitches, has already been described and explored under Glitch Massaging (which is *observed by the therapist*) and Track-to-Target (which is *experienced by the client*). Both of these procedures were described above. In the same way that bilateral stimulation is associated with Sweeping, bilateral audio or tactile stimulation accompanies Glitch Holding.

PGO waves/REM sleep, anterior cingulate activation, and left frontal As mentioned under "Sweeping" (above), the likely cortex activation. neurobiological mechanism suggested by Stickgold (2002) is repetitive reorientation of attention from one location to another, resulting in neuromodulation by PGO waves similar to those associated with REM sleep. Levin and his associates saw increased activation of the anterior cingulate and left frontal cortex after such alternating (bilateral) stimulation (Levin, Lazrove, & van der Kolk, 1999). The effect of increased activation in the anterior cingulate is more accurate appraisal of the present danger of incoming stimuli. Because clients are usually in safe, relatively quiet psychotherapy sessions when this is occurring, levels of limbic activation can be reduced as the anterior cingulate confirms the safety of the current environment. With increased activity in the left frontal cortex, most clients will also have greater capacity for semantic memory processing and communication of their traumatic experiences to others (rather than PTSD flashbacks, which are fragmented and inexpressible).

Increased interhemispheric interaction, with retrieval and encoding of episodic memories. Cristman, Propper, and their colleagues (Cristman & Propper, 2001; Cristman, Garvey, Propper, & Phaneuf, 2003; Propper & Christman, 2008) described a link between eye movements and hemispheric activation. Lateral eye movement leads to sustained increases in activation of the contralateral hemisphere. During encoding of episodic memories, prefrontal activations are left-lateralized, whereas during retrieval they are right-lateralized. Bilateral stimulation increases interhemispheric interaction, which has been found to facilitate episodic memory.

Bilateral increases in activation of the anterior cingulate and right prefrontal cortex. Van der Kolk and his associates applied three sessions of alternating (bilateral) stimulation to PTSD participants and noted that PTSD symptom scores decreased by 50% (van der Kolk, Burbridge, & Suzuki, 1997). Using SPECT imaging, they reported "After effective treatment, subjects registered increased activity in the anterior cingulate bilaterally and there was a suggestion of increased activation of the right prefrontal cortex. This suggests that recovery from PTSD may depend on the capacity of higher brain functions to override the input from limbic structures charged with the initial appraisal of the degree of threat posed by incoming sensory stimuli" (p. 106). Devinsky, Morrell, and Vogt (1995) described the anterior cingulate as an amplifier and filter which helps to integrate emotional and cognitive components of the mind. Bergmann (2000) noted that when activation of this area is increased through bilateral stimulation, integrative processing of traumatic memories into semantic and other cortical networks is facilitated.

Reconnection of affective and cognitive subdivisions of the anterior cingulate cortices. Corrigan (2002) hypothesized that bilateral stimulation (visual, auditory, or tactile) of relevant thalamocingulate tracts improved the balance of reciprocally inhibiting cognitive and affective subdivisions of the anterior cingulate cortices. In PTSD, the primarily rostral and ventral affective subdivisions are hyperactive while the primarily caudal and dorsal cognitive subdivisions are hypoactive. He suggested that in peritraumatic dissociation, there is a disconnection of the affective and cognitive subdivisions, so that affective activity remains high, but without conscious awareness. Corrigan (2002) concluded that "...if confirmed, these neurobiological hypotheses may provide technologies for further acceleration of psychotherapies" (p. 15).

Low frequency depotentiation of memory synapses. Rasolkhani-Kalhorn and Harper (2006) presented a parallel between bilateral stimulation at frequencies from 0.5 to 1.5 Hz and naturally occurring lowfrequency stimulation (LFS) in the brain. They reported results from studies in which very small (0.1 mA) electrical currents were applied at low frequencies (1 to 5 Hz), resulting in depotentiation of memory synapses at the molecular level. These authors suggested that, if applied appropriately when memories are activated (and therefore more labile), bilateral stimulation can elicit depotentiation of intense, aversive aspects of traumatic memories. This occurs in the lateral nucleus of the amygdala and associated limbic and paralimbic structures, including the anterior cingulate cortex and the locus coeruleus. The result is that the more cognitively and verbally associated structures can provide recall of relevant details of memories and associations, once the previously overwhelming somatic and affective intensity is dissipated. The authors also stressed the value of bilateral stimulation for increasing interhemispheric processing. They noted that a number of important brain structures are bilaterally specialized. Two that are relevant for traumatic memory processing are the hippocampi and the

anterior cingulate gyri. Lateralization of function is typically applied most beneficially when the complementary (or reciprocal) functions of the left and right structures are *both* mobilized.

Harper, Rasolkhani-Kalhorn, and Drozd (2009) put the bilateral brain stimulation-depotentiation model to a test using qEEG and LORETA. They found that even when bilateral tactile stimulation of the hands was varied in frequency, the qEEG output at the frontal poles remained fixed at approximately 1.5 Hz. Delta activity was noted in the ventromedial prefrontal cortex, running posteriorly to the amygdala. These same regions are activated in slow wave sleep, and the qEEG waves recorded during bilateral brain stimulation (while processing traumatic memories) closely resembled those during slow wave sleep. In light of the slow wave patterns observed in emotional memory processing regions of the brain, and concomitant reported reductions in somatoaffective intensity, the authors concluded that the fear memory synapses of participants had been depotentiated via bilateral brain stimulation. They also reported that this depotentiation continued, sometimes for months after application of bilateral brain stimulation. We observed this same spontaneously occurring continued recovery of participants during follow up assessments of OEI in a recent research study (Bradshaw, McDonald, Williams et al., 2011).

## **Applying Release Points**

If, during trauma processing, clients experience intense core trauma symptoms such as nausea, throat (airway) constriction, or chest compression (constriction of the bronchi), they are not likely to be motivated to persist through many intense incidents. In addition, it takes a good deal of session time to reground clients using traditional techniques like diaphragmatic breathing, progressive muscular relaxation, autogenics, imagery, and grounding. It was for that reason that R.B. looked for, and found, what we refer to as "Release Points." It made sense that if there was a *most intense place in the most intense eye* (usually a glitch in the dominant eye) there would also be a *least intense place in the least intense eye* (a calming place in the nondominant eye). After a good deal of searching, several locations were identified where most clients experienced rapid, significant relief from these disturbing symptoms.

Many of the greatest discoveries in science and medicine have occurred in a "bottom-up" fashion, through serendipitous "accidents" during trial-and-error experimentation and case-based clinical work. Taleb (2007) refers to this as "stochastic tinkering." In Merriam-Webster's dictionary (Merriam-Webster Online, 2008), the origin of the word "stochastic" is

credited to the Greek *stochastikos* – skillful in aiming, from *stochazesthai* – to aim at, from *stochos* to target, aim, guess. One meaning of the word "tinker" is "To work with something in an . . . experimental manner; To try to repair or improve something . . . by making small changes or adjustments to it." Taleb advocates the application of rigorous reasoning less to the *planning* than to the *selection* of what works.

For a diagram of Release Point procedures, the reader is referred to our OEI client handbook (Bradshaw & Cook, 2008), or our Web site www.sightpsychology.com, under 'Resources.' The client is first directed to cover his or her dominant eye, and the therapist has the client follow a finger down from the nondominant eye to a spot approximately 12 in. in front of the client's lowest rib. Without bending the head down (i.e., using peripheral vision), the client then tracks the therapist's finger horizontally, parallel to the surface of the client's abdomen, away from the center of the client's chest. For most clients, there is a point along this continuum where a respiratory release occurs. Compression (bronchoconstriction) of the chest (or hyperventilation) stops almost instantly, providing relief. At this point, the therapist has the *client* place his or her fingers at the same Release Point and encourages use of the technique between sessions to gain relief from panic symptoms. The gastrointestinal Release Point to relieve nausea and throat (upper airway) constriction is toward the *other* side of the client's chest. Although the description seems complex, the actual procedure is smooth and simple once mastered. Therapist time and client discomfort can therefore both be greatly reduced.

## Neurobiological Behavioral Conceptualization

The Release Point procedures are simple to learn and teach clients; however, the hypothetical underlying neurobiological mechanisms are quite complex. For that reason, a number of paragraph subheadings are provided. It seems likely, given the brainstem-level of the symptoms being quickly addressed, that these techniques involves rapid shifts from activation of the unmyelinated DVC (associated with the *freeze* response) or mobilization of the SNS (associated with the *fight or flight* response) to activation of the parasympathetically associated myelinated VVC with the vagal brake applied (associated with self-soothing and calming, and inhibition of arousal). As mentioned earlier, these neurophysiological responses are addressed in Porges' (2001, 2007) polyvagal theory. Neurobiological detail has proven helpful in more quickly identifying effective locations for Release Points in specific clients.

Bronchoconstriction, vagus nerve, lateral rectus muscle, and abducens nerve. When considering possible mechanisms of eye positions associated with these two main Release Points, it seems that each one may be associated with a different cranial nerve in addition to the myelinated ventral vagal nerve. All but two of the oculomotor muscles are associated with the oculomotor nerve. The two remaining extraocular muscles are each innervated by separate cranial nerves. These happen to be the muscles associated with the respiratory and gastrointestinal/upper airway Release Points. The respiratory (chest, bronchi) Release Point requires that the uncovered nondominant eye be abducted. This is accomplished with innervation of the lateral rectus muscle by the abducens nerve. If this release is accomplished through activation of the VVC, the speed of release would be expected to be fast, because the VVC is myelinated. In fact, this procedure does appear to instantly shift from DVC bronchial constriction (low tone) to VVC bronchial dilation (high tone) in clinical work.

Nausea and upper airway reflexes, vagus nerve, superior oblique muscle, and trochlear nerve. The gastrointestinal (stomach) and throat (upper airway) Release Point requires the uncovered eye to be pulled inward and downward. This movement is accomplished via innervation of the superior oblique muscle by the trochlear nerve. I (R.B.) hypothesize that this release instantly shifts from DVC activation of the trigger zone for vomiting—area postrema (Miller & Leslie, 1994), to calming of the stomach by activation of the VVC response with vagal brake applied. It is hypothesized that this same Release Point instantly shifts from DVC constriction of the lower esophageal sphincter (Hornby & Abrahams, 2000) to VVC relaxation of this muscle, and from DVC constriction of airway-protective reflexes in the throat (Jordan, 2001; Lutz & Sulkowski, 2004) to VVC relaxation of these muscles.

Vagal fibers and branches to be explored. It is unknown at this point why the vagal fibers associated with (a) the anterior bronchial (ventral pulmonary) and posterior bronchial (dorsal pulmonary) branches are associated with the abducens nerve (CN VI), while (b) the anterior and posterior gastric branches in the abdomen and the pharyngeal branch, superior laryngeal nerve, and recurrent nerve in the upper airway are associated with the trochlear nerve (CN IV). These mechanisms can be explored by neuro-ophthalmologists and visual psychophysiologists.

It is also unknown at this point why movement of the nondominant eye inward and downward seems to activate the VVC "brake on" response in both the upper airway (larynx, pharynx, and trachea) and the stomach (with relief from area postrema triggering of nausea). The nuclei of the cranial nerves primarily associated with the visual system (III - Oculomotor, IV - Trochlear, and VI - Abducens) and the cranial nerve associated with respiratory and gastrointestinal smooth muscles (X - Vagus), however,

are all located in the brainstem and have many interconnections requiring future exploration (Holstege, 2011).

## **Summary of Neurobiological Conceptualizations**

All of the OEI techniques described above are organized around different levels of neurobiological response, including the following: (a) social connection (VVC with "brake on"), (b) fight or flight (SNS - VVC with "brake off"), and (c) freeze (DVC). Microattunement during neuroactivation (NAMA) helps restore social connection. Switching for trauma titration and negative transference clearing, Glitch Massaging, Tracking-to-Target, and Glitch Holding with Bilateral Stimulation all facilitate activation of SNS responses for processing. Finally, Switching for dissociative artifacts, Sweeping, and Release Points are all used to provide rapid relief from DVC symptoms. Glitch Massaging can be used to move frozen "shock" states into more accessible SNS responses, so that opportunities for calm social connection can be increased.

Assessment and intervention are closely linked when OEI is used, requiring continuous monitoring of experiential and physiological markers, and attunement to unfolding sequences of microprocesses (time frames of seconds to minutes). This is coordinated with meso-process response patterns (time frames of hours to days). This coordination of micro- and meso-level phenomena is evident in protocols for specialized applications of OEI.

### SPECIALIZED APPLICATIONS OF OEI TECHNIQUES

### **Couples**

In couples work, the technique of Switching for transference checking and clearing has been extended to address perceptual distortions between partners. Several examples may illustrate the usefulness of this procedure. In one couple the man had engaged in many affairs, including liaisons with prostitutes, but was unable to have a satisfying sexual relationship with his wife. Upon having him stand facing his partner and alternately covering and uncovering his eyes (Switching), out of one eye he saw the woman who had sexually abused him when he was 12 years old, and with the other eye uncovered he perceived his wife normally. After a series of Switches, this distortion dissolved and the therapist proceeded with regular couple therapy. In another case, the spouses were having difficulty sustaining emo-

tional intimacy. When the man looked at his wife out of one eye he did not see his wife's face, even though he was looking directly at her. With the other eye uncovered he perceived her normally. As he Switched, this distortion dissolved so he saw her face normally with both eyes. This procedure offers new opportunities for not only understanding relational problems, but for rapidly and permanently resolving them. While there are many other adaptations of OEI procedures for couples work, such detail is beyond the scope of this article. An edited volume with chapters on specialized applications of OEI is available (Bradshaw & Cook, 2011). More details regarding couples therapy with OEI, and case examples regarding each of the specialized applications described below, are provided in that book.

### **Children and Adolescents**

In work with children, OEI can be combined with play therapy, sand tray work, art therapy, and family (parent-child) interventions. Because there is not an elaborate and rigid protocol for OEI, the techniques (particularly Switching) can be seamlessly integrated with other approaches. OEI is used at "stuck points," where children are experiencing either excessive emotional intensity (i.e., "stirred up") or are unable to verbalize what they are experiencing. These relatively nonverbal OEI tools facilitate resolution with much less shame and defensiveness. Extensions of transference checking and clearing for parent-child work can be extremely useful as well. They are used for resolving reactions or triggers in response to particular tones of voice or facial expressions (from either the parent or child/adolescent). Once Switching has been completed, the therapist can start Tracking-to-Target on glitches associated with triggered intensity in response to particular facial expressions or tones of voice exhibited by each individual. It is possible to permanently resolve major reactivity in relationships using this approach. OEI has also been used to resolve rage reactions and night terrors and improve parent-child bonding in adoption and fostering relationships (after ensuring that these difficulties are not due to any *current* abuse or neglect of the children). Schore (2003a) stressed the importance of early detection and amelioration of parent-child disturbances in attachment and attunement and suggested a number of strategies (pp. 304–305). Simple OEI transference checking and clearing procedures (including mirror work, and extensions to all of the OEI procedures described above) could accomplish this inexpensively, without the necessity of qEEG and other neural assessment equipment.

#### **Families**

All of the relational assessment and treatment applications of OEI described above for couples and children have been used in families (to resolve sibling rivalries, blended family issues, and step-parent relationships with children and adolescents). Parent–child relationships associated with foster care and adoption have also been successfully addressed with OEI.

To illustrate specialized applications of OEI for particular presenting problems (disorders), and multidisciplinary work, several examples are discussed below.

### Eating Disorders, Addictions, and Performance Issues

With eating disorders and body dysmorphic disorder, Switching for transference checking and clearing can be extended to mirror work. A client may see himself or herself as *fat* or *ugly* out of one eye, and *acceptable* or even *attractive* out of the other. The process of exposure to mirrors must be done gradually, starting with having the client simply *think* about looking in a mirror. This can progress to looking at *nonoffensive* parts of the body in a small mirror across a room, and gradually proceeding to the point where a full-body image is observed, several feet from a full-length mirror.

Another use of OEI involves the targeting of urges (urge to binge, urge to purge, urge to self-harm) or the disturbing emotional states that accompany or precede them, first with Switching and then with Tracking-to-Target Glitch Massaging. The same approach can be used with substance and process additions. The client is asked to "bring up the full intensity of the urge to *use* (food, alcohol, drugs) or *do* (binge, purge, self-harm, gamble, view Internet pornography)." Switching is done to see whether the experience is the same through both eyes, or different. If different, the client is instructed to Switch until the intensity equalizes (it usually lowers). Then Tracking-to-Target Glitch Massaging is used to downregulate intensity. Many clients with eating disorders experience somatic dissociation. OEI is used to reduce numbness, lack of awareness, and dissociation. When working toward *performance* goals, clients are instructed to focus on their objectives, and therapists target whatever emerges that *interferes with* goal attainment.

### **Dissociative Identity Disorder (DID)**

Clients with DID are often able to access different alters (ages, reactions, perceptions), depending on which of their eyes is covered. This is particularly

useful when client verbalizations degenerate into nonintelligible speech or they are otherwise unable to express what is being experienced. As they Switch (uncover the other eye) verbal expression is often restored. The process of Switching also facilitates coconsciousness, increasing communication, and cooperation between alters. These procedures, and others presented earlier in this article, are extremely helpful for accessing and titrating traumatic material and reducing dissociative symptoms.

# **Body Therapies and Neurotherapy**

OEI has been applied in multidisciplinary sessions with massage therapists, chiropractors (myofascial release), and other body workers. Such cotreatment can be very intense (activating both somatic and affective cues) and for that reason is not used early in therapy. The benefits of cotherapy sessions are that (a) shifts can be observed by all three individuals: the client, the body therapist, and the psychotherapist; (b) position, touch, and movement of the head and extremities can bring dissociated material to the surface to be concurrently addressed by the psychotherapist using OEI techniques, and the body therapist; and (c) very early, preverbal experiences can be processed nonverbally. OEI has also been combined with neurotherapy (qEEG neurofeedback and brain-driving), through either consecutive or concurrent sessions involving application of these modalities. Typically the two modes of intervention are interposed when one therapy has plateaued. When used concurrently, neurotherapy is often used to bring dissociated traumatic material to the surface, so it can be processed with OEI. The therapist is able to see the traumatic material rising, through increasing amplitudes in target frequency ranges (typically alpha and theta bands). Neurotherapy is also used over the anterior cingulate cortex to calm rumination and worry (or obsession/compulsion) and in the occipital cortices to increase distress tolerance and improve sleep.

# **Preamble to Case Examples**

The core tenets of OEI theory include elements of experiential, psychoanalytic, neurobiological, and behavioral therapies. Specific neurobiological and behavioral conceptualizations for each of the five sets of OEI techniques were offered in an earlier section titled "Descriptions of OEI Techniques and Intended Applications." Finally, in this final section of the paper, two case examples are presented (by R.B.) to elucidate the imple-

mentation of this Experiential-Psychoanalytic-Neurobiological-Behavioral model of OEI. Both cases below are composites of actual material from clients but the *timelines for symptom recovery* extracted from selected cases are *accurate*. The clients in both cases involve individuals suffering from Complex PTSD (CPTSD). For that reason, a brief review of the major diagnostic criteria for this disorder is provided below, with an accompanying list of OEI techniques to address each major symptom cluster. The diagnostic criteria for CPTSD were introduced by Judith Herman (1992) and have recently been expanded and discussed at length by Ford and Courtois (2009).

### **Diagnostic Criteria for Complex PTSD**

### Difficulty Regulating Emotional Impulses

This includes unregulated anger or rage, fear, humiliation, despair, and methods used to cope, including addictions, and self-harm. OEI techniques to address these difficulties include: (a) Switching for in-session reduction of affective and somatic intensity, and for self-help at home with core trauma symptoms; (b) Release Points—to avoid panic attacks in the office, and at home; (c) Switching and Sweeping for artifacts; and (d) Tracking-to-Target for emotional and physical intensity, and urge to *use* (behavior/substance) or *do* (self-harm).

### Alterations in Attention and Consciousness

This includes various expressions of dissociation, including alters in DID and DDNOS (different "personalities"), depersonalization (feeling unreal), and derealization (feeling as if things or other people seem unreal). OEI techniques include: (a) Switching to access different ego states or alters and facilitate coconsciousness, internal communication, and cooperation; (b) Switching & Glitch Massaging for dissociative symptoms (tingling and numbness—hands, face, or feet; headaches, dizziness, or lightheadedness); (c) "Can you believe it...?" questions to break through shock and disbelief (see case example below for illustration); (d) Use of balance boards to assess loss of balance and reduce dissociation during trauma processing in therapy; and (e) Tracking-to-Target and Glitch Holding with Bilateral Stimulation for chronic pain.

### Negative Self-Perceptions

This includes chronic sense of guilt and responsibility, low self-worth, self-loathing, and shame. OEI techniques include: (a) Tracking-to-Target on critical inner voices; (b) Switching for feelings of shame or self-loathing; (c) Glitch Massaging in high and low regions of the eyes, for fear of disapproval by authorities and shame in the presence of adult evaluators, respectively; and (d) Transference Switching in mirrors to dissolve negative distortions of the client's own face and/or body perceptions.

## Distorted Perceptions of Abusers

This includes internalized belief systems of abusers, especially if they were caretakers during early childhood years. OEI techniques include: (a) Tracking-to-Target on critical inner voices (introjections of abuser statements—especially voices encouraging them to harm themselves or others); and (b) Switching to shift alters and encourage greater coconsciousness, communication, and cooperation between alters.

### Difficulties in Relationships With Others

This includes low levels of trust and difficulty with intimacy; and belief that others are self-serving and will deceive, betray, abandon, and abuse. OEI techniques include: (a) Transference Switching and Glitch Massaging to clear distorted negative projections, and resolve approach-avoidance cycles in abusive relationships; and (b) Transference Switching with other people (or photographs) during couple, parenting, and group work to clear nonverbal and paraverbal transference triggers, preventing interactional intensity, and allowing deeper social connection to form in relationships.

# Body Symptoms and/or Medical Problems

These may relate directly to type of abuse—like back, digestion, urinary infections, and sexual disorders (for sexual abuse)—or to *any* major body system. OEI techniques include: (a) Tracking-to-Target on chronic pain and/or numbness; and (b) Release of traumatic material with Switching and Glitch Massaging to recover from impaired functioning in various body systems.

### Shattered Assumptions in Terms of Meaning

This includes hopelessness about finding someone to understand clients, or their suffering, or about finding a treatment that will provide lasting relief. It involves feeling despair about *never getting relief* from unrelenting psychological anguish. OEI techniques include: (a) Switching, often used in initial sessions to provide rapid shifts in (and *relief from*) affective and somatic intensity; (b) Switching to detect and clear transference reactions to therapist, partners, family members, or group members, improving relationships; and (c) Switching to increase capacity for mentalization, and promote hope.

# **Broad Scope for Application of OEI Techniques**

The term trauma therapy in the title of this article is not limited to a particular treatment model or orientation. Instead, it refers to target symptoms and relational patterns that *all* therapists see, and attempt to address, in their clients—the consequences of traumatic experiences. In the daily practices of many therapists there is less work with combat veterans, rape survivors, and MVA or burn victims than with, say, couples, individuals with personality disorders, or children with attachment difficulties; however, a great deal of relational conflict, attachment impairment, and personality dysfunction reflects early onset relational trauma (van der Hart, Nijenhuis, & Steele, 2006; van der Kolk, 2002b, 2005; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). In fact, most of the disorders and symptoms listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) are associated with psychological trauma (Briere & Scott, 2006). Ranging from acute stress disorder to trichotillomania, the pervasive presence of trauma symptoms includes mood, anxiety, substance use, eating, somatoform, and dissociative disorders.

While there are a good number of *theoretical* models and approaches for treatment of complex PTSD (see Curtois & Ford, 2009, for an extensive review), there is a much more modest range of *interventions* designed to directly address the myriad symptoms associated with early onset trauma, especially at the microlevel of clinical process. OEI techniques address both abreactive and dissociative states. As explained above, they can be applied within any theoretical model, delivered in a variety of modalities (individual, couple, family) and can be implemented concurrently with other approaches (including expressive therapies, body therapies, neurotherapy, and hypnotherapy).

#### CASE EXAMPLES

The following two composite cases are analyzed at different levels of abstraction. In Case #1 activities, reactions, and symptoms that occurred in a single 90-min session are presented. The presentation is not a verbatim transcription of session content but does give the reader a concise view of how OEI techniques are implemented *in real time*. The interposed material in italics includes rationales for the techniques, extensions to more general applications, and outcomes of therapy beyond the target session. In Case #2, a much higher level of abstraction is applied. The highlights of three years of treatment are provided, including the modalities implemented and results. Summaries of clinical content are juxtaposed with italicized explanations of interventions and outcomes.

### **Case # 1**

A 55-year-old divorced Indo-Canadian female with two grown sons is employed in a food processing plant. She has had 15 sessions to this point, and we are transitioning from working on safety and stabilization to addressing trauma processing. At the end of the last session she disclosed that she had been engaging in self-harming behavior (cutting with razor blades) for the past year, on a daily basis. We completed a suicide assessment, and reviewed procedures and resources to address parasuicidal behavior, before completion of the last session.

We began this session with a review of how the urge to self-harm had manifested over the past week. As I asked her the question, I could see the furrowing of her brow (a nonverbal experiential conflict marker, indicating confusion, and possible disconnection from the events discussed at the end of the previous session). She questioned herself aloud, vaguely: "I guess we did talk about that, didn't we?"

Therapist (T): Can you believe that you cut yourself last week with those razors?

Client (C): It seems unreal, sort of like a movie, where I'm watching someone else doing it.

(T): Try covering that eye (pointing to her left eye).

Gesturing at the eye to cover requires less left-brain verbal processing than an instruction such as "cover your left eye." Because one of the goals of OEI is to facilitate somato-emotional processing, it is important to have the client stay connected to her emotions and physical sensations rather than shift out of that focus to decipher verbal instructions.

- (C): (covers her left eye with her left hand). I know historically that I did it, but I'm just not connected to it . . .
  - (T): Try Switching, and see if it's the same or different.

Typically when clients are still in "shock and disbelief" states regarding events and behaviors, they evidence separation from the expected affective responses (dissociation). One would expect to see emotionality around this behavior, but instead there is a profound detachment. For that reason I started a "Can you believe it?" procedure, accompanied by the OEI Switching technique. A.C. developed this, and finds she has to use it almost every session with her clients who have had severe, early onset abuse, particularly by caregivers. If a client was severely sexually abused by her own father from three to 12 years old several times a week, for example, she may have difficulty "believing" that he did it. If that is the case, a series of "Can you believe . . ." questions is asked, perhaps starting with "Can you believe any father would hurt his own daughter?" and ending with "Can you believe you can't believe it?" It is not uncommon for clients to experience a physical and emotional connection to the event with one eye covered but not with the other. If that occurs, Switching 6 to 12 times usually dissolves the emotional numbing, and the client reports "feeling" the event or behavior (identifying with it), regardless of the eye covered. In more severe cases when the client does not experience a "connection" with either eve covered, A.C. resorts to tapping the "triple warmer" acupressure point on the back of either of the client's hands (between, and just behind, the knuckle of the little finger and the knuckle of the ring finger) while the client has one eye covered. This typically reduces the client's dissociation from the event with that eye open. A series of Switches then typically equalizes the connection.

- (C): (covers her right eye with her right hand, and I see her breathing halt, her throat constrict, and her jaw tighten).
- (T): Looks like you're connecting with it more on that side . . . (with an expression of empathy).
  - (C): (nodding) You can see that, hey?

I am mirroring some of her intensity on my face, and experiencing some of the emotion I observe in her, in my own body (embodied simulation). In response, I offer intentional attunement, which resonates with her subjective experience, deepening the connection between us. In a typical 90-min OEI session, this occurs between 50 and 200 times. Rather than waiting for a response to a single intervention (e.g., gestalt empty chair exercise), we are actively engaging clients in microactivities, and continuously reflecting our observations, which usually accurately describe their internal experiences. The activity above is the simplest form of this intersubjective process. It can

get very complex and may require tracking rapid shifts (in alters, emotional states, dissociative symptoms, transference reactions, or dorsal vagal symptoms such as bronchial constriction or nausea). Appropriate shifts in techniques must be made relatively quickly. These rapid changes typically occur during application of the OEI techniques of Glitch Massaging, and Glitch Holding with Bilateral Stimulation. Empathically attuned responding is maintained throughout, and the process can be slowed down as needed by returning to gradual, gentle Switching.

- (T): Can you try Switching a few times and see how things feel?
- (C): (Switches 12 times at her own pace, i.e., six opportunities to cover her left eye and six to cover her right eye). I can feel it on both sides now, but it doesn't feel good . . . (winces, and avoids eye contact with me).

In the interests of space and Time I will paraphrase conversations and summarize activities during the session, resorting to short transcribed portions only to illustrate the application of specific procedures. Having observed this client's tendency to dissociate from strong emotions, I ask her to stand on a balance board for much of the remainder of the session, taking breaks every 15 minutes to sit and reflect.

(T): What's coming up for you now? Looks like some embarrassment or shame about this.... Could you just look at me and cover one of your eyes? Let's just do a transference check.

Her sudden avoidance of eye contact with me suggests that a situationally based negative transference reaction has just emerged. Part of the OEI protocol for the first session is an explanation of transference reactions and a transference check and clearing. For that reason, when I mention it at this point, the client is aware of what we are doing.

- (C): (covers her left eye with her left hand). Okay, you look fine (undistorted) with this eye. (Switches and covers her right eye, and immediately evidences an expression of confusion and disbelief).
  - (T): Looks like something is different there. What do you see?

There are four levels to the OEI transference check procedure:

- (a) Proximity—"Notice how far away I look" (same? or different? with left and right eyes);
- (b) appearance—"Notice how I look to you with this eye open." "Now Switch." "Do I look any different to you with this eye covered or do I look the same?" Differences may include minor shifts in color, light, or skin tone; or major differences such as a completely different face (or facial expression) with one eye open than with the other eye open, or a face with one eye open and no face with the other eye open;

- (c) affective or somatic experiences (subjectively experienced by the client)—"What do you feel physically and emotionally with this eye open?"; and
- (d) cognitive projections—"Does it seem like I'm on your side, or against you, with this eye open?" or "What do you think I'm feeling toward you, or thinking about you, with this eye open?" (client alternately covers eyes, and checks for differences).

Once this four-part procedure has been done several times, the client typically just needs to check perceptions with each eye and respond to the question: "Same or different?"

- (C): That's weird! On this side you look like my dad . . . . Your eyes look mean and you have an angry face . . .
  - (T): Wow! Just Switch a few times and see how it goes . . .
- (C): Okay, it's dissolving. (after seven minutes of Switching, at the client's pace, she reports): They're pretty well equal now. I just see you as "you" with both eyes. That was *weird* . . .
- (T): Our brains can get pretty stuck in the past during those negative, unexpected experiences! How *old* did you feel when you saw my face as your dad's?
  - (C): Really young . . . like four or five . . .
- (T): That's what it looked like to me too. We'll have to come back and look at this more later. Right now it seems really important to go back to what you experienced during the cutting, even though I know it's pretty "yucky"...

I explain the importance of connecting to the state she is in at the height of her "urge to do" (in this case, to cut her skin with a razor), and ultimately to the emotional state(s) immediately preceding that urge. I have her focus her gaze on the floor or a wall, as she connects to the somato-emotional experience of the urge. She is standing on the balance board and starts to wobble (loss of balance is associated with dissociation from her body, ostensibly due to the intensity of the somato-emotional state she is experiencing). I reflect and explain the loss of balance, and encourage her to try to stay connected to her body as she focuses on the urge.

I have her check whether the nature and intensity of the urge is the same or different with her left compared to her right eye open. She reports they are different . . . both are high in intensity, but one is experienced in her chest, while the other is experienced in her abdomen. Because they are different, I have her Switch repeatedly at her own pace, while noticing what she feels physically and emotionally with each eye open. I can see that the intensity is gradually coming down with both eyes, and I reflect this in my commentary to her. She then evidences signs of confusion and concern, furrowing her

brow, and I query what she is experiencing. She is somewhat delayed in her response, and has trouble forming her words.

- (C): It's just  $\dots$  I'm feeling  $\dots$  kind of "floaty"  $\dots$  light-headed and a bit dizzy  $\dots$  I don't know  $\dots$
- (T): It's okay, you're just getting one of those 'dissociative artifacts' due to the intensity of the emotions you were just experiencing.

I can use this term easily at this point, because it was introduced in the Informed Consent procedure during the first session and is typically observed at some point in almost every session. It appears that we have just shifted from processing SNS intensity to triggering DVC numbing, so I have her shift her focus from the urge to cut, to the dizziness, and keep Switching. She identifies one eye which, when uncovered, is associated with much higher levels of dizziness, so I instruct her to just "touch on" (briefly uncover) that eye and then Switch back to the other eye and stay there until the dizziness dissipates. She does this at her own pace, and the dizziness reduces but remains at a SUD level of 4 (of 10). For that reason, I initiate the OEI Sweeping procedure. As the tracking of my hand with her eyes becomes smoother, the artifact is dissipating. I reflect that, while observing her face, breathing, and throat. Other common "dissociative artifacts" include headaches; tingling and numbness in hands, face, or feet; and visual distortions. These can all be cleared in a matter of minutes using this same procedure.

I now have her refocus her attention on, first, the urge to cut, and then the emotion(s) that immediately precede that urge, while I track through one or both eyes and observe glitches in movement. I start Glitch Massaging (moving my hand—or face, or body—in various directions through, toward, or away from, those glitches in her eyes). While doing so, and observing her blinks, skips in movement, and so forth, I am commenting on levels of intensity, emotions, and physical changes I observe, as they happen. When things get intense, I typically move her eyes through those regions more quickly and provide more expressive empathy and reassurance.

At one point during the processing of intense despair and loneliness, she experiences bronchial constriction (a DVC response, which feels like 'chest compression,' and often precipitates panic attacks). I guide her eyes to her Respiratory Release Point. Note: This release point was identified during the first session, and taught to her for home use, when she mentioned during intake that she sometimes experienced panic symptoms. We prepare clients with the "fire drill" before the "fire" (i.e., before it is needed quickly to relieve a DVC response). The Release Point works instantly to relieve her bronchial constriction, shifting her back into a VVC state, where she can reengage in a social connection with me. We then return to the emotional states preceding the urge to cut, and I Track-to-Target the remaining symptoms. While

tracking in the upper regions of her eyes, with both eyes open, I see her eyes diverge from their parallel courses (a phenomenon we refer to as visual splitting). She reports her subjective experience:

- (C): Whoa! Looks like you have two or three hands there!
- (T): Yup . . . there's some splitting. Can you just cross your arms while I hold your eyes here? Just alternately tap your shoulders now, and tell me when it looks like I have one hand.

While I am observing a temporary cross-eyed phenomenon, my client is experiencing double-vision. As she engages in bilateral tactile stimulation, while focusing on the two extended fingers of my hand (held in the place where I observed her visually "split"), I gradually (in two or three minutes, typically) watch her integrating. I see her eyes align at the same time she returns to single vision. I suspect this splitting is a protective, dissociative response to an early, intense, negative experience when her eyes were fixed at that precise location, angle, and distance. The final symptom that emerges is an internal voice with critical, shaming statements (she identifies it as her father's voice):

- (C): That's the voice I hear in my head every time I cut... "You're pathetic!" "You disgust me!"
- (T): Let's dissolve that. I'm just going to Track-to-Target through your visual fields. Can you let me know where that voice gets the loudest, the most believable, or the most disturbing?

As I track through her visual fields, with her left eye covered, and then her right, I see a spot where her whole body shudders with intensity, and start Glitch Massaging in different directions, and at different distances, until I find the direction, distance, and type of movement that quickly dissipates the intensity. Finally, we conclude with some "Safe Place" and "Container" imagery and several grounding techniques before ending the session. Following this session, the client went 1½ years without cutting. At the end of that time, she cut once during a very distressing time in her life and we followed the same set of procedures used above, clearing the urge and accompanying emotions. She hasn't cut again and it has been more than a year since that session.

#### Case #2

A 47-year-old Caucasian British male in his second childless marriage, is employed part-time in two home-based businesses. At nine years of age he was tied to a bed and sexually tortured by adult male and female

perpetrators. He became active in various forms of violence and addiction, notably a severe substance use disorder involving marijuana with concurrent tobacco addiction from 12 years old to the start of OEI treatment at 47 years of age. By the time he entered therapy he was unable to perform daily activities other than basic personal hygiene and food preparation. He was "stoned" for the majority of his days and evenings.

Therapy was initially focused on current addictions, to support stabilization and engagement with therapy. Roughly the same protocol was followed as in Case #1 but, instead of focusing on the 'urge to do' (cut skin with razors), we focused on the 'urge to use' (marijuana), and the accompanying emotions. Within six weeks of starting OEI treatment (i.e., after six 90-min sessions), he stopped using marijuana completely and quit smoking cigarettes (and has not resumed to this day, eight years later).

A later phase of therapy was focused more on trauma processing. In light of the extremely physical nature of his childhood abuse, we arranged cotherapy with a massage therapist who did myofascial release and various other kinds of touch and massage to activate abuse-related emotions and physical sensations, so they could be cleared with OEI Switching and Glitch Massaging. The massage therapist held the client's body and head in various positions and moved his limbs and neck through different motion sequences. These interventions triggered multisensory recall of particular seconds and moments in the torture event, including what was said and done to him.

At one point, the abusers went into another room, and tied up and abused his little sister. They then returned, to tell him what they had done (he could hear her screaming, moaning, and pleading with them). The male abuser said, "and it's all your fault!" (my client had inadvertently unlocked and opened the door before they pushed him down and grabbed both him and his little sister). The relational patterns associated with this experience included (a) a powerful male abuser and a powerless male victim; (b) the rescuing of an abused female victim (my client untying his little sister); and (c) a young boy caught off guard and severely traumatized because he hadn't been strong (or alert) enough to prevent it. These themes played out in most of the rest of his life. He became obsessed with violence, weapons, and strength training. All of his relationships were assessed in terms of power and control ("top dog" and "underdog"), and he proceeded to find and "rescue" troubled married women who were in abusive relationships, only to be left by them later, because he would turn from rescuer into victim. He would also reenact the persecutor role in consensual adult relationships, but this was not sustainable when applied beyond the sexual dimension of relationships (see Karpman's [1968, 1971] drama triangle).

Within three years of commencing weekly OEI treatment, macrolevel identity and relationship patterns changed. His disdainful wife

left him as he recovered from trauma and stopped his addictions. He was hesitant to attempt dating with other women, however, claiming that he was "too ugly to attract other women" (in fact, his objective appearance was that of a male model). I asked him to look at his face in a mirror with one eye covered, and he saw himself as ugly (pockmarked, with a scrawny neck, and blemishes—the way he had appeared during adolescent years due to acne). When he Switched to cover the other eye (continuing to look at his face in the mirror), he saw himself as attractive (i.e., the way others saw him). Within less than a dozen Switches, the perceptual distortion had cleared, and he felt confident enough to start dating again. He finally met and married a stable and mature woman who was comfortable with his new ability to express emotional vulnerability. He has shared a mutually loving and respectful marriage with her through the past five years, and continues to work on what is referred to in the integration phase of trauma therapy as "phobia of normal living" (Steele, van der Hart, & Nijenhuis, 2005). He is still surprised as he continues to expand his accomplishments and improve his relationship with his current wife. The disbelief and selfdoubt are gradually fading, however, as he moves forward with his life.

#### **SUMMARY**

Observed & Experiential Integration (OEI) was developed through clinical innovation, with clients suffering the effects of multigenerational trauma. The five sets of practice-based OEI techniques are organized around different levels of neurobiological response, including: (a) social connection (VVC with "brake on"), (b) fight or flight (SNS - VVC with "brake off"), and (c) freeze (DVC). The clinical tactics of OEI involve microlevel processing of activated psychophysiological schemas. Neuroactivation is accompanied by microattunement (NAMA). Clinical protocols have been illustrated with composite case material. OEI theory has been located within the broader psychotherapy integration literature, tracing core evolution through assimilative integration of relational psychoanalytic theory into an experiential base. Theoretical elaboration was pursued through the integration of neurobiological and behavioral theories, to form an Existential-Psychoanalytic-Neurobiological-Behavioral theory of OEI.

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