

Healing PTSD with the “Eye Movement Integration” Computer Method¹

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Abstract

The Program Eye Movement Integrator is an electronic version the psychotherapeutic methods of “Eye Movement Integrator” (Andreas, 1992,) and Dr Francine Shapiro’s EMDR (Eye Movement Desensitization and Reprocessing, 1995). It was developed on the basis of Paul Goodwin’s fundamental theory of *small neural networks division mechanisms* in brain (1988, p 91-101) constitutes a neurobiological basis of the Program. Ernest Rossi and David Cheek’s *State Dependant Memory* concept empowered psychotherapeutic implications of the electronic method (Rossi and Cheek, 1988, p 57).

Eye Movement Integrator Program is intended for alternative psychotherapeutic sessions with clients suffering from:

- Depression
- Post Traumatic Stress Disorders
- Anxiety
- Phobias,

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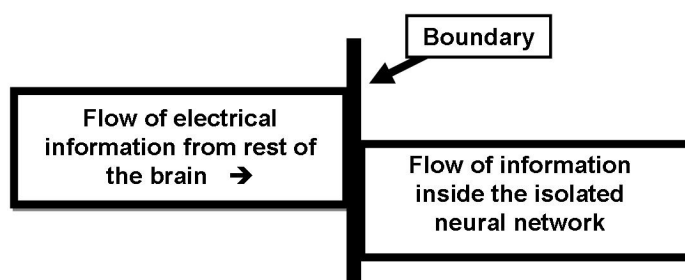
as an additional instrument among other therapeutic methods to drive the client to feel positive about the entire course of therapy.

Healing the effects of Post traumatic Stress Disorder after extreme events considerably improves wellness of population. Moreover, a short-term therapy significantly contributes to recovery of those who had suffered most. For this reason the “Eye Movement Integration” computer method was developed to assist emergency aid workers, psychologists and therapists working in the post war or extreme events areas.

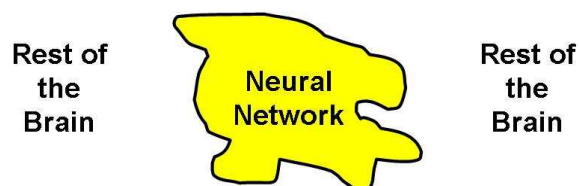
Boundary Conditions In The Mind

When any experience occurs in our life, new neural networks are laid down to record that event and its meaning. To create these networks, the neurones grow an array of new dendrites.

Paul Goodwin [10] suggests that under certain conditions of stress, small neural networks become divided from the rest of the brain, by a boundary which interferes with the flow of electrical information between neurones, much as a pane of dark glass interferes with the flow of light. (as diagrammed below).



This leaves the neural network functionally separated out from the rest of the brain (as diagrammed below):



State Dependent Neural Networks

Ernest Rossi and David Cheek first described the psychotherapeutic implications of the process by which a neural network becomes separated from the rest of the nervous system [17, p 47-68].

The particular mixture of chemicals present when a neural network is laid down must be recreated for the neural network to be fully re-activated. This is called “state dependent memory and learning” or SDML. Memories and learnings are *dependent* on the state they are created in. “Neuronal networks may be defined in terms of the activation of specifically localised areas of neurons by information substances that reach them via diffusion through the extracellular fluid In the simplest case, a 15-square mm neuronal network could be turned on or off by the presence or absence of a specific information substance. That is, *the activity of this neuronal network would be “state-dependent” on the presence or absence of that information substance.*” [17, p. 57].

Healing State dependant memory

State dependent memory is the biological basis of many other phenomena, Post Traumatic Stress Disorder including. In persons with PTSD, memories of a traumatic event generate high levels of adrenaline in the body. The person has of course had many other mildly disturbing experiences that they have coped with effectively in their life before. But in the case of their memory of the accident, they find themselves unable to use these healthy resources. This is because as soon as

they begin to re-experience the traumatic event, they are operating from a neural network which has inadequate connection to their “healthy” state. When reliving the traumatic event, they are unable to remember their usual skills. They can only run the emotional responsiveness, behaviour, strategies, values and beliefs that are associated with the neural networks laid down at the time of the extreme situation.

Dr. Richard Bolstad [6, p. 29-35] submits several ways for getting the resources from where they reside in the person’s other neural networks, and shifting them into the neural network where the accident/event has been coded. Eye Movement Integrator (EMI) [1, p. 9-10] and the method of Eye Movement Desensitization and Reprocessing (EMDR) are among them. Both methods as variants of the same process allow/cause the free flow of information across neural networks (eg, where the person quickly accesses visually from one side of the visual field to the other and back; see [19]).

A vast amount of research has supported the use of EMDR especially for Post Traumatic Stress Disorder [19, p 328-341]. In these studies, EMDR outperforms training in relaxation, biofeedback, orthodox counseling, systematic desensitization and other inpatient treatment programs. Dr. F. Shapiro suggests that by holding the “target memory” in awareness, the person activates the neural network where it is stored. The rapid eye movements then activate the person’s normal information processing system and shift information until it makes contact with neural networks where new resources are stored. EMDR leads to changes in beliefs, changes in emotional response, and submodality changes in the person’s memory of significant events (e.g. seeing their remembered image of an aggressor shrink in size).

Taking into consideration the scientific research on EMI and EMDR’s origin, their application, evaluation of the client, setting up the therapy session, discovering the memory network and meeting challenges that are most fully presented in Dr. Danie Beaulieu, PhD “Eye Movement Integration Therapy” book [2], allow to conclude that “...the human mind is endowed with powerful means of healing itself, if only we can trust them and find ways to facilitate them” [2 p 250].

In order to elicit the natural healing recourses and accelerate the recovery process, we modeled the computer version of EMI method. The multimedia interactive method called “Eye Movement Integrator” with permission of its author Steve Andreas (USA), is compact (900 KB) and easy to use. It was first presented on the 26th European Conference on Psychosomatic Research 19-22, June 2002 in Lisbon, Portugal and approved by specialists engaged in mental health treatment and psychotherapy (USA, Israel, France, New Zealand, and Portugal).

The aim of the session with the Program is to help the person to access unconsciously the resourceful states by specially organized eyes movements and accelerated information processing in 4 steps.

The essential guidelines leading to success are:

1. The absence of resistance. Evidence shows that people trust computers as reliable instruments. During electronic session a person is extremely attentive both to verbal (therapists) and programmed comments & instructions.

2. A client selects a frame and inserts the dramatic image/event inside, thus securing a double automatic (unconscious) dissociation from the problem. In any case, the person has to reduce and shrink the dramatic material in size.

3. Interactive regime permits the client to choose:

- ☐ The initial frame's size, shape and borderline
- ☐ Colorful filling of the frame
- ☐ Further corrections after each step as instructed
- ☐ Modify the speed of the movements
- ☐ Return & re-process a preferable step, if needed.

4. By holding the "target memory" of traumatic event in awareness, the person activates the neural network where traumatic memory is stored without analyzing the psychological context.

5. The Program sets the unconscious process where *information flows freely through the neuro system* without any barriers or divisions, very much like it occurs during REM-phase.

6. The programmed movements of the frame (where the client puts in his/her terrifying event) are modeled according to research results, thus setting healthy unconscious healing mechanisms [11-16, 20].

7. The *four programmed steps* are preceded under the therapist's supervision, who keeps attentively marking all changes in the client's posture, relaxation, reactions, moods improvement. The consultant encourages and reinforces positive alterations. In the opposite case, the consultant helps the person to reframe the shades of meaning of their clients' personal experience verbally, by using positive affirmations. Therapists are strong at it professionally.

For the period of 24 months (2003-2005) the Program opened its new areas of application. In Dr. N. Vorobyov's addiction treatment clinics 120 drugs abused and 565 alcohol abused patients improved their self-esteem, self-belief, and discovered helpful resources for a healthy lifestyle due to EMI regular application. Together with medical treatment Dr. Valentine Feudorov has developed a new approach in gaining brilliant results with her patients (unpublished data).

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