Initially published in *Traumatology* (1996) Revised 2004

A Four Activity Model of Psychotherapy and Its Relationship to Eye Movement Desensitization and Reprocessing (EMDR) and Other Methods of Psychotherapy

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Abstract: *This paper presents a general, information processing model of psychotherapy, based on Francine Shapiro's EMDR, which encompasses both recently developed and traditional psychotherapy methods. It is posited that methods of psychotherapy can be conceptualized as employing up to four categories of activity to promote adaptive functioning. These activities include: 1. Accessing of information already acquired 2. Introduction of new information 3. Facilitation of the processing of information 4. Inhibition of accessing. EMDR and traditional methods of psychotherapy are described in terms of this model.*

Lang (1977) proposed an information processing model for understanding fear-based psychopathology. Foa & Kosak (1986) and Chemtob (et al., 1988) have expanded on this model and made further psychotherapeutic suggestions. In developing a new method of psychotherapy, EMDR, Shapiro (1989,1994, 1995) also used an information processing model. She initially called it the Accelerated Information Processing model, but now refers to it as the Adaptive Information Processing (AIP) model (Shapiro, 2001). The AIP model starts with the premise common to other information processing models, that learning-based psychopathology is the result of information being held dysfunctionally in the nervous system because of incomplete processing. The AIP model is distinguished by the beliefs that information is normally processed to an adaptive state unless it is blocked, and that removing the block(s) will result in adaptation.

Another distinguishing feature, which is more important for this discussion, is that adaptive reprocessing can take place very rapidly. Specifically, non-adaptive painful information (e.g. emotion, belief, intrusive imagery) defined as part of psychopathology, can be resolved, and traumatic events can often be positively integrated, with the same speed that such maladaptive elements can be acquired (Shapiro, 1989; Lipke & Botkin, 1993, McCann, 1992; Wilson, D., et al. 1995). This is considerably different from the

therapeutic expectations of traditional models of psychotherapy. Shapiro's model was derived from her clinical work with EMDR, the sustained effectiveness of which has now been supported by numerous controlled studies (Rothbaum, 1997; Wilson, Tinker & Becker, 1995, 1997; see Shapiro 2002 for summary).

Building on this previous work, and personal clinical experience with EMDR, I have developed a four activities model of psychotherapy to describe the specific activities engaged in by therapists and clients. This model has been helpful in teaching psychotherapy, in selecting which intervention to use at choice points during therapy sessions, and may be helpful in exploring underlying active ingredients that make psychotherapy effective. In presenting this model, EMDR will be looked at thoroughly, but reference will also be made to other newer therapies such as Thought Field Therapy (TFT: Callahan,1995) and Alpha-Theta Neurofeedback (Peniston & Kulkosky,1991) as well as other better known methods of therapy.

All forms of psychotherapeutic treatment may be seen as having the primary goal of helping clients reprocess information, such as maladaptive beliefs, behavior, emotions, sensations and painful intrusive images, which are held dysfunctionally. It is also a goal of therapy to help clients acquire and process new information to enhance adaptive functioning. It is proposed that in the course of working with clients to achieve these goals, therapists, no matter what method they use, may engage in activities that are intended to have effects that fall in up to four categories. These are: 1. Accessing of present information 2. Introduction of new information 3. Facilitation of the processing of information 4. Inhibition of information accessing.

Category 1. Accessing of existing information

This involves the bringing to, or near, awareness of information already stored in associative networks. Some of this information is accessed from declarative memory systems, such as the date of an event, or the fact that the event is in the past, or that something positive was learned from the event. Other information, such as conditioned emotional responses, and “automatic" behavior, is accessed from non-declarative systems. (See Epstein, 1994, for a review of conceptualizations of two distinct

information systems.) Information accessed will not always be of a specific real event. Information may be in the form of a principle or rule, or it may pertain to an imagined event. In other words, wherever or however information is held, accessing is bringing up what is already there.

Different methods of psychotherapy emphasize one or another aspect of the information networks. The aspect(s) of the network focused on, and the way in which it is accessed, is a large part of what distinguishes one method from another. For example, psychoanalysis accesses information by interpretive questioning and free association; systematic desensitization does so by constructing and using items from hierarchies, and imaginal exposure does so by intensely describing stimuli and responses associated with the target activity or event. Cognitive therapies directly access cognitive parts of information networks, while body therapies directly access physical sensations.

To some extent, because most methods ultimately hope for changes in behavior, feeling and thinking, only a few methods may be discriminated by their goals. For example, some behavior therapies would treat changes in thinking as irrelevant, and could be distinguished because changes in thinking would not be a goal.

Category 2. Introduction of new information

This involves the presentation of new information by the therapist, or the encouragement to engage in activity in which information might be acquired. In all methods of therapy, therapists provide new information about the treatment they offer. Dynamically oriented therapists may introduce information about the unconscious. Behavior therapists introduce information about reinforcement. As therapy continues, the therapist sometimes presents normative data such as the fact that even courageous soldiers feel fear in combat, or that perpetrators of abuse may manipulate their victims into feeling responsible for the abuse.

Category 3. Facilitation of information processing

This is novel and more difficult to define. In discussing this category, it will be helpful

to first discuss information processing in psychotherapy, and distinguish it from information acquisition, storage and retrieval. Successful information processing is the active communication, or sharing, among information networks, resulting in adaptive transformation of the information. The lack of information processing is the inability of information networks to intercommunicate, resulting in limitations on adaptive transformation.

To clarify by example, when a traumatic event is remembered as if it is still happening, and is always interpreted in the same way, from only one point of view, as it was first experienced, then that event is acquired, stored, and retrieved, but only minimally processed. (It may be somewhat isolated in non-declarative memory systems.) When that same event is remembered as occurring in the past and can be understood from different perspectives, and is not accompanied by excessive emotion, then it is processed.

There are different degrees of processing. For example, a person who has been traumatized in a fire, and has not processed the event, may report little memory of the details, but may have a dissociative experience, and act as if he is reliving the event when he sees a fire in a movie. Alternately, he may just block out almost all emotion, (often described as "numbing"), in general or in response to fire related stimuli. Partial processing may also result in that person having excessive levels of fear (which could be defined as any fear, since fear is inappropriate when threat no longer exists). Another way in which partial, but more complete, processing might be seen is through the resolution of emotional distress to the event, without improved understanding from the experience.

Complete processing would include not only the elimination of maladaptive negative emotion, but also some positive resolution, such as recognition of strength in surviving, or, for a person who acted in a regrettable way, perhaps gratitude to have the chance to do better in the future. (This is distinguished from extinction, which may be only partial processing, or inhibition of accessing.) Complete processing may also include a positive shift in self or world view schema, such as moving from considering oneself as a victim

to seeing oneself as an explorer through life.

Pure category 3 activities are abstract. They do not convey meaning in and of themselves. They are not inherently strongly reinforcing or aversive. In that they facilitate connection to positive information, they would be experienced as positive; in that they facilitate accessing negative information, they would be experienced as negative. Few methods of therapy employ pure category 3 activity. EMDR, with its eye movement, and other repetitive sensory/motor activities, is one that does so, as might Thought Field Therapy, and possibly, Alpha/Theta Neurofeedback. All category 3 activities may not have the same type of information processing effect. It is possible that they vary in intensity of effect, type of information that they most influence, or in a variety of other ways. The effect of category 3 activity would also likely be affected by the level of accessing that preceded it. More thorough information processing would be expected if accessing activity is more inclusive.

More conventional methods of treatment do not add an abstract activity to facilitate processing, but rather use timing, or other variations in the manner in which they access existing information or introduce new information. For example, in systematic desensitization, the accessing of less traumatic images occurs before accessing of more traumatic images, which presumably leads to a greater likelihood of processing than the reverse order. In psychodynamic therapy, the therapist might carefully time the moment he/she reminds the client of a past emotional overreaction so as to, in information-processing terms, foster adaptive reprocessing.

Activity that does occur in more traditional treatments, such as the use of various aversive measures found in some forms of behavior therapy, would not be considered category 3 activities because they convey meaning that it is hoped will be connected to target material. In some situations, the introduction of aversive activity would chiefly be a category 1 activity. For example with the behavior therapy technique covert sensitization, the therapist help the client access an aversive feeling, like nausea, at the same time the client is exposed to a stimulus the client is trying to find less desirable. It is hoped the two will connect and the aversive feeling will change the value

of the target behavior.

It must be emphasized that it is not being implied that therapies, which do not use category 3 activity, do not lead to successful information processing. In fact, category 3 activities have not yet been proved to be facilitative. To use the example of EMDR, it is not yet fully established that eye movement or hand tapping, or other activity, is essential to the EMDR format. This paper, however, is partially based on belief that clinical observation and research are strong enough to make it far more likely than not that category 3 activity is facilitative. See Lipke (2000) for a discussion of eye movement in clinical studies. More recently some studies of eye movement outside the therapeutic analogue context dampen both positive and negative affect as well as image intensity (Andrade, et al. 1997; Kavanaugh et al. 2001; van den Houts, 2001) Another line of research suggests eye movement has a positive effect on episodic memory, which would conform most clearly to an affectively neutral facilitative effect (Christman et al. 2003)

Category 4. Inhibition of information accessing

The familiar examples of this in psychotherapy are the use of relaxation techniques to decrease anxiety, or turn attention away from troubling elements in the associative networks. As mentioned above the purpose of psychotherapy is to process, or reprocess, information. However, sometimes an intermediate goal is to help the client isolate information, to provide temporary relief of destructive distress, or inhibit destructive behavior. EMDR treatment often includes inhibition activities, such as relaxation or self-hypnosis, to close sessions in which traumatic events are not completely processed. Standard imaginal exposure uses relaxation training at the end of sessions for a similar purpose. Outside the realm of psychotherapy, perhaps anxiolytic and neuroleptic medication may be seen as being used to inhibit the accessing of information.

The way in which the four categories define psychotherapy can be illustrated by describing them in the context of EMDR. EMDR has rapport, history taking, and contracting components, which share much with other methods, but also have

distinctive qualities. These stages of treatment, chiefly involve category 1 activity, the accessing of existing information networks, and category 2 activity, the introduction of new information. While therapeutic change often occurs in these initial stages of treatment, and EMDR can be distinguished from others at these stages, the most notable differences begin in the next stage where dysfunctional thoughts and emotions are addressed and where the bulk of therapeutic change is expected.

At this point in treatment, which begins with category 1 activity, the accessing of present information, EMDR borrows from, and shares, much of category 1 activities used in other treatment methods. However, EMDR arranges these activities in a unique way. In EMDR, when this stage begins:

1. The client is asked to picture the worst moment of the target event. This is a key part of imaginal exposure. (The examples of similarities between EMDR and other methods are meant to be illustrative, not all inclusive.)

2. A negative cognition, usually in the form of a self-statement is identified/developed. This is similar to both Rational Emotive Behavior Therapy (REBT)/Cognitive Behavior Therapy (CBT) and the paradoxical intervention of Strategic Therapy.

3. An alternative, positive cognition is identified/developed and then rated for felt veracity. This step, again, shows similarity to REBT/CBT, and in the rating of the positive cognition a core principle of behavior therapy is observed. This stage in EMDR often involves category 2 activity as clients may not possess information needed to construct a positive cognition.

4. Emotions and physical sensations present as the event is recalled are identified and rated, again sharing features with body therapies, exposure therapies, and general behavioral principles.

5.The client is asked to bring all of the negative components of the target event to awareness. The similarity to imaginal exposure is clear.

6. At this point category 3 activity, facilitation of information processing, (usually 20

seconds or so of eye movement).

7. After completing the eye movements the client is asked what comes to awareness, without any prompt from the therapist about type of experience. The client is essentially asked for a free association, borrowing from psychoanalytic approaches and the accepting non-judgmental attitude of client centered therapy.

8. Another round of category 3 activity is then initiated. In the simplest cases this pattern continues until the target event is desensitized/ reprocessed. (It should be pointed out that step 6, 7 & 8 activity is very different from standard exposure procedures, in which the client would be urged to maintain attention to distress provoking stimuli for prolonged periods; distraction from target would be discouraged. (Grayson, Foa and Steketee, 1982; Lyon and Keane, 1989) Thus, it is unlikely that simple exposure is the principle change mechanism in EMDR.)

When alternating category 3 activities with client statement of the content of awareness does not lead to successful information processing, further category 2 (introduction of information) and category 1 (accessing) activities are initiated. These can be borrowed from any number of therapeutic approaches. For example, the client may be asked to imagine talking to a person involved in the event (borrowing from Gestalt therapy) prior to a new round of category 3 activity. Or, a client who believes a grieved person is in Heaven may be asked to imagine where that person is now (borrowing from pastoral counseling) prior to a new round of category 3 activity. Finally, at the end of a session, if the client is still experiencing some distress, category 4 activity, inhibition of information processing, in the form of relaxation exercises or hypnosis may be initiated.

The four activity model is a very broad outline of psychotherapeutic activity which I see as having potential for integrating psychotherapeutic modalities from an information processing point of view. As this model is further elaborated and explored, it may help shed light on which particular intervention might be most useful at any given moment in the course of psychotherapy.

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I would like to thank William Zangwill and Ric Cherwin for their helpful suggestions in this revision.