

CHAPTER I

INTRODUCTION

"By means of image and parable one can persuade, but prove nothing. That is why the world of science and learning is so wary of image and parable."
Nietzsche

Art therapy has typically focused on issues associated with the human need for creative experience --- art as therapy --- and the power of art as a form of expression --- art in therapy (Cane, 1951; McNiff, 1992; Rubin, 2001). Marriage and family therapists argue that many of the difficulties that present in therapy are best treated systemically, i.e., from the perspective of or in the presence of the family as a whole. Today there are a growing number of practitioners who transcend the boundaries between art therapy and family therapy. Working from a systemic perspective, these practitioners use art process and product as a means of communication, an alternative and/or adjunct to language (Kwiatkowska, 1978; Landgarten, 1987; Arrington, 2001; Riley & Malchiodi, 1994; Linesch, 1993).

More recently, family therapists have extended their systemic perspective in a new direction with the introduction of the self-in-the-system (Nichols, 1987) and internal family systems models (Breunlin, Schwartz & Mac Kune-Karrer, 1997). This dissertation further extends the systemic perspective to not only the self-in-the-system and internal family systems models, but also to underlying biological models. The field of mental health is placing increased emphasis on the relationship between the biology of neuroscience and various treatment modalities, and systemic issues should be part of the discussion. This dissertation represents an effort to integrate elements of these various viewpoints. It describes a neurologically-based art therapy modality --- bilateral art --- and describes both neurological and family therapy systemic

perspectives that support the use of bilateral art. Additionally, it presents protocols for bilateral art therapy with individuals and dyads, as well as clinical experiences that provide the first indications of effectiveness.

Rationale

Gazzaniga (1998a, 1998b) has written extensively on the structure and function of the brain, particularly the functions of the two hemispheres of the cerebral cortex --- the left hemisphere associated with language and speech and the right hemisphere associated with visual-motor activities. Much of Gazzaniga's work was based upon studies of patients whose corpus callosum had been severed to prevent communication between the left and right hemispheres--- a technique used to inhibit seizures associated with epilepsy --- hence the term "split brain ." Experiments revealed that the left hemisphere functions seemingly independently of its right counterpart. Gazzaniga described additional dominant functionality of the left hemisphere --- cognitive problem solving. In contrast, the right hemisphere was very poor at problem-solving. Additionally, Gazzaniga explored the interactions between the left and right hemispheres and discovered a left brain capable of confabulation, i.e., capable of unconsciously manufacturing explanations for the output of the right brain.

While Gazzaniga's experiments were conducted on patients with split brains, Schiffer (1998) generalized these findings to normally functioning brains. Schiffer (1998) provided evidence for two autonomously functioning brains, each with its own personality, memories, and behaviors. He performed experiments using goggles that restricted visual stimulation of the left or right sides of the brain. These experiments revealed different "senses of well-being" or affect when different halves of the brain were visually stimulated. While not specifically mentioned by Schiffer, this phenomenon may provide evidence for one theory posited for the success of eye

movement desensitization and reprocessing (EMDR) (Shapiro, 2001). This theory argues that the eye movements in EMDR stimulate both sides of the brain while focusing on a particular target, thus invoking memories from both hemispheres and facilitating a reprocessing and integration of those experiences.

Extending this lateralized view of the brain to include the more primitive limbic system, Schore (1997) argued that the limbic system, the brain structure associated with primary emotion, is more closely associated with the right brain than with the left brain. Thus, the outputs of the right brain more closely reflect the emotional content of the limbic system and the neural organization established early in life than the narrative outputs of the left brain.

More recently, Cozolino (2002) stated

we have to assume that integration between the right and left hemispheres is a vital element of healthy brain functioning. Anxiety and affective disorders, psychosis, alexithymia, and psychosomatic conditions have all been hypothesized to be causally related to deficits in the regulations and integration of neural networks connecting the hemispheres. (p.117)

Additionally, Cozolino (2002) and others have described the presence of experience-dependent implicit memories (Schore, 1997; Schore, 2000; Siegel, 2001a, 2001b). For example, an infant may be frightened by the loud barking of a dog and will become upset by future exposure to dogs. This response carries with it no sensation of recall or remembering. These implicit memories additionally reflect early attachment experiences and are embedded in our neural network architecture, providing unconscious filters of current experience.

These claims are grounded in Kandel's (1985) seminal work on the biology of the sea slug that identified the physiological mechanisms that contribute to learning and memory.

Kandel's (1985) findings demonstrated that experiences are reflected in changes in neuronal architecture and thus he argued that the process of psychotherapy produces biological changes in the brain. He stated

The demonstration that learning is accompanied by changes in the effectiveness of [neuronal] connections has led us to a new way of viewing the relationship between social and biological processes in the generation of behavior. [...] In so far as social intervention, such as psychotherapy or counseling works, it must work by acting on the brain, and quite likely on the connections between nerve cells. (p.831)

Siegel (2001a, 2001b), and Schore (1997, 2000) extended Kandel's conclusions and argued that it is the continuous evolution of embedded experiences that provides the basis for responses to external stimuli and it is the task of psychotherapy or psychopharmacology to alter a neural architecture's maladaptive components. Schore's work on attachment supports this view. He argued that the experiences of early development are primarily reflected in the right brain organization stating:

the developmental neurosciences are now identifying the "lower" autonomic and "higher" central brain systems that organize in infancy and become capable of generating and regulating psychobiological states. These homeostatic structures that maintain stability are primarily lateralized in the early developing right brain. (Schore, 1997, p.596)

Schore (2000) and Siegel (2001a, 2001b) both described the implicit memories established through early attachment experiences. They described the role of the right brain as the home for these implicit memories, noting that, developmentally, the left brain is not receptive until late into the second year of life. Cozolino (2002) extended this notion of neurally embedded

architectures to specifically include the impact of family dysfunctions. He claimed that “the development of children, on all levels, is shaped and distorted by all of the adaptations necessary for their emotional survival within the family” (p.58). Siegel (2001a) supported this claim and used the term “interpersonal neurobiology” to refer to the relationship between “neurophysiological process and interpersonal experience” (p. 997).

Art therapy has long been regarded as a modality that integrates left and right hemispheric activity (Silver, 2001, Nucho, 1987). It has been used as a modality for language impaired populations, and for children who are often more comfortable with right brain activities than language. Additionally, art therapists have argued for the “visual voice” of the right brain in highly verbal left brain dominated populations as well (Rubin, 2001; Cappachione, 2001). The right brain’s visual thinking facilitates self expression and personal growth. This dissertation describes an art therapy protocol, first proposed by Cartwright (1999), that explicitly seeks responses from both the left and right hemispheres for the purposes of integrating and balancing polarized beliefs, cognitions, or feelings.

One hypothesis for the use of bilateral art described in this dissertation is that just as a family therapist joins with a family and perturbs the family’s patterns of behavior, bilateral art serves to perturb maladaptive neural organization. This hypothesis is consistent with Cozolino’s (2002) view of the need to integrate and balance the experiences and memories embedded in the neural architectures of the various parts of the brain, including the specialized right and left hemispheres. It is also consistent with Kandel’s (1985) theories of learning and memory based on observed experience-induced change in the biology of the sea slug.

This thinking, while engaging, is clearly speculative and empirical arguments for or against are well beyond the scope of this effort. Nonetheless, this dissertation represents an

effort to integrate elements of these diverse viewpoints. It describes a neurologically-based art therapy intervention, bilateral art, that engages both dominant and non-dominant hands in the creation of images in response to polarized beliefs, cognitions or feelings. It presents specific protocols for the use of bilateral art with both individuals and couples/dyads. Retrospective case studies using enhancements of the bilateral art intervention protocol for individuals support these arguments. These case studies demonstrate clinical application of the intervention to a range of presenting problems including, differentiation from family of origin, parenting, loss, trauma, and self-esteem. The studies provide the first documented evidence of the effectiveness of the bilateral art intervention. Additional case studies reflect development of two different bilateral art intervention protocols that facilitate exploration of relationships. The first protocol is an adaptation of the protocol for individuals for use with dyads and it has a dual purpose: to facilitate both openness and integration of polarized thoughts or feelings in one member of a couple and to increase empathy in the other. The second protocol is an enhancement that facilitates exploration of and reflection upon a relationship and is applied to the supervisor-supervisee dyad that is an integral part of the training of marriage and family therapists. Experiences reveal contraindications as well as indications for the use of these protocols. Additionally, experiences reveal changes in behaviors that argue for effectiveness following the use these protocols.

Biases and Limitations

There are limitations to what can be claimed. This effort reflects the development of bilateral art protocols and initial experiences using these protocols. These experiences are provided by a retrospective review of clinical records. The number of clients and the range of their presenting problems is a function of their random assignment to clinicians and thus reflects

a typically diverse agency client population. Similarly, the specific clients with whom the bilateral art interventions were used was a reflection of my response to both the client and the client's particular presenting problems. Thus, the results described in this dissertation are those of a scientist-practitioner, rather than those of the scientist directing a controlled study. The protocols were dynamic and evolving as can be seen with the introduction of a scaling process half-way through one client's treatment. The case studies chronicle the development and use of bilateral art protocols and describe initial experiences that argue for controlled studies to evaluate the effectiveness of the intervention.

Contributions and Implications

This effort provides what I believe are several original contributions. First and foremost it presents the first documented use of the bilateral art protocol with both individuals and couples/dyads. The case studies described in this dissertation provide the first evidence of the effectiveness of bilateral art as an intervention. Additional contributions include enhancements to Cartwright's (1999) bilateral art protocol for use with individuals as well as the development of two distinct bilateral art protocols for use with dyads. No less important are the results of experiences using these protocols, as they provide information about the circumstances or presenting problems that argue for and against the use of these protocols and changes in behavior observed and reported following the use of the protocols.

The implications for the field of marriage and family therapy fall within both the theoretical and the practical domains. The relationship between the brain's neuronal development and interpersonal experiences is accepted by at least some marriage and family therapy perspectives. The notion that the use of art, and in particular bilateral art, may alter neuronal architecture, while speculative, is worthy of consideration by the marriage and family

therapy community. In the practical domain, this effort provides concrete protocols for interventions with individuals and couples/dyads that reflect these theoretical considerations. In addition, the second protocol applied to supervisor/supervisee relationships is a unique approach to addressing obstacles to the supervision process.

Finally, this effort provides a model for research that bridges the gap between scientist and practitioner --- theory and practice. The retrospective review of clinical records provides case studies that illuminate clinical discoveries. The further aggregation and analysis of data --- both quantitative and qualitative --- extracted from the case studies further illuminates these discoveries.

Summary

This chapter provides an overview and rationale for this investigation into the development and use of bilateral art in clinical practice. It describes the need to integrate perspectives from the fields of art therapy and marriage and family therapy with advances in neuroscience. Chapter 2 provides a review of previous efforts to integrate these three fields and the origins of the bilateral art as an intervention. Chapter 3 provides a discussion of the case study as a research methodology and details of the bilateral art intervention protocols. Chapter 4 provides evidence of the effectiveness of the bilateral art protocols with individuals through retrospective clinical case studies. Chapter 5 presents clinical experiences using bilateral art with dyads. Chapter 6 coalesces and summarizes quantitative elements from the clinical experiences presented in Chapters 4 and 5. Chapter 7 discusses the results of these clinical experiences, clinical indicators for the use of bilateral art, and directions for future research efforts.