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Assessment and Therapeutic Application of the Expressive Therapies Continuum: Implications for Brain Structures and Functions

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Abstract

The Expressive Therapies Continuum (ETC) provides a theoretical model for art-based assessments and applications of media in art therapy. The three levels of the ETC (Kinesthetic/Sensory, Perceptual/Affective, and Cognitive/Symbolic) appear to reflect different functions and structures in the brain that process visual and affective information. Assessment of the formal elements in an artwork can help a therapist determine how a client is processing information via the different levels of the ETC. Treatment planning can identify stepwise transitions between the ETC levels as well as horizontal transformations within each level. The author posits that these same transitions reflect the different structures and functions of the cortex that are involved in processing visual and affective information. Understanding of the ETC, thus, can enhance art therapy interventions and further studies on art therapy and the brain.

Introduction

Three main criteria differentiate art therapy from verbal therapies: the use of art media as a means of expression and communication, the multileveled meaning present in visual expressions, and the therapeutic effects of the creative process. The Expressive Therapies Continuum (ETC; Hinz, 2009; Lusebrink, 1990) is a schematic framework that is directly based on these three criteria and on the different levels of information processing involved in visual expression. In an earlier article (Lusebrink, 2004), I proposed a theoretical basis for the model by identifying the different brain structures and functions that may be involved with each of these levels. This article summarizes the main brain structures and functions of visual and affective information processing and further elaborates on a theoretical basis for the use of the ETC in therapy.

A brief review of art-based assessments and the characteristics of the ETC levels will orient the reader to formal visual elements in an artwork that are understood to reflect the maker's strengths, weaknesses, and psychopathology. The assessment of the different levels of the ETC becomes the entry point for intervention in art therapy; changes in the visual expression during the course of therapy can also be assessed. My proposed theory is that art therapy interventions that promote the transitions between and within the levels of the ETC may be aligned with the different brain structures used in processing visual information and emotions.

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Art-Based Assessments With Formal Visual Elements

Art-based assessments consider the formal elements of visual expression as a way of helping to determine clients' cognitive and emotional functioning and address their strengths, challenges, and progress in art therapy (Betts, 2006). Two widely researched assessments are the diagnostically-based Diagnostic Drawing Series (DDS; Cohen, Hammer, & Singer, 1988; Cohen, Mills, & Kijak, 1994; Mills, Cohen, & Meneses, 1993) and Draw a Person Picking an Apple from a Tree (PPAT; Gantt & Tabone, 1998). These assessments consider numerous formal elements of visual expression and syntax as variables that may be associated with psychiatric diagnoses.

The DDS consists of a free drawing, a tree drawing, and a feeling drawing. The DDS rating system uses 20 basic categories that are grouped according to formal elements of visual expression. Certain configurations have been correlated with symptoms found in patients diagnosed with dysthymia, depression, and schizophrenia (Cohen et al., 1988); organic mental syndrome in older clients (Couch, 1994); patients with Alzheimer's disease (Knapp, 1994); and children with adjustment disorders (Neale, 1994). Across all diagnostic categories, the visual expressions of the patients and the controls in these studies were differentiated by their use of such formal elements as line and shape, line quality and pressure, placement of elements on the page, use of space, inclusion or lack of essential details in representational images, integration or lack of integration, degree of disorganization, presence or absence of inanimate objects, movement, and inclusion of words.

The PPAT is a drawing that is scored using the Formal Elements Art Therapy Scale (FEATS), which is comprised of 14 categories of formal elements. The PPAT has been used in two normative studies (Bucciarelli, 2007; St. John, 2008). Bucciarelli (2007) scored the PPAT drawings of college students on 13 of the FEATS scales and found that the only scale that did not achieve interrater reliability was the Perseveration scale. In St. John's (2008) study, PPAT drawings from a nonclinical sample of high school adolescents

did not show any significant results for the four diagnostic categories identified by Gantt and Tabone (1998), except for one student who had a positive score in the bipolar category. In comparison, PPAT drawings by psychiatric patients showed significant differences for 10 out of the 14 scales (St. John, 2008).

Formal elements in various configurations have differentiated the visual expressions of subjects who are controls from those of patients with organic mental syndrome, depressed mood, bipolar/manic disorder, and paranoid schizophrenia (Gantt & Tabone, 1998); substance abuse disorder (Rockwell & Dunham, 2006); and attention deficit/hyperactivity disorder (Munley, 2002). In an earlier study (Lusebrink, 1975), based on the Formal Elements of Visual Expression, I asked participants to create one painting of self-perception and one of present feelings. The study considered seven main categories of formal elements and compared the visual expressions of members of the control group with the visual expressions of psychiatric inpatients and female and male prison inmates. The visual expressions of the latter were differentiated by such features as use of line, variation of shape, utilization of the surface, number of colors used, interpenetration of forms, internal structure, and abstract versus realistic content.

Although there is considerable variation in the interrater reliability between the different studies above and between the different categories of visual elements considered in these studies, the art-based assessments discussed have been shown to detect the possible presence of psychopathology. The basic formal elements of visual expression that all of these assessments have in common are: line, use of space, lack of details or differentiation of form, use of color, integration, content, implied energy or movement, and developmental level.

The presence of formal elements in the normal range of the PPAT is presumed to show an individual's strengths and indicate the absence of impairments, distortions, or dissociations in the functions of visual information processing. The number and range of the scales involved in the PPAT, however, are limited due to the prescribed parameters of a research design, including a reality-oriented topic for the drawing task. Further elaborations of the formal elements in a normal range of free art expressions, as compared to their psychopathological variations, are presented in Table 1. This information is aligned with the schema of the ETC to provide normal versus psychopathological variations in visual expressions on the different levels of the ETC.

Visual Information Processing in the Brain

The forgoing discussion raises the question of how brain structures and functions may be involved in visual expressions and changes thereof in the presence of psychopathology (see Figures 1 and 2 to identify areas in the brain discussed below). Sensory information is processed on three hierarchical levels of perceptual knowledge: (a) elementary sensory features are analyzed by the primary sensory cortices; (b) associated features in a given modality (art, music, movement, etc.) are processed respectively in the unimodal association cortex; and (c) processing across several sensory and non-sensory modalities occurs in the transmodal or multimodal association cortex in the parietal lobe and in a "bottom-up" direction (Christian, 2008; Fuster, 2003; Lusebrink, 2004). According to Fuster (2003), "bottom-up" processes begin in the primary sensory and motor areas and follow a "series of cortico-cortical paths toward higher associative areas [that] can be traced anatomically" (p. 50). Fuster also explained that "neural wiring is available for parallel processing, as well as for integration and distribution of information in both directions, that is, bottom-up and top-down" (p. 67). He posited that the cortical networks dedicated to perceptual attention are the same as the network dedicated to processing sensory information. In the "top-down" direction, higher-level cognitive processes modify those occurring on the lower levels.

Of particular importance in art therapy, visual information is first processed in the occipital lobe in the primary visual cortex: the striate cortex, where there are cells that are sensitive to color, to lattices and their spatial frequency, and to orientation and movement (Carlson, 2001). The information received from the striate cortex is combined and analyzed in the visual association cortex. This visual information is then divided into two streams of analysis: the lower or ventral stream and the dorsal or upper visual stream. The lower or ventral stream takes the pathway to the second level of the visual association cortex in the inferior temporal lobe that responds to features and shapes, and integrates their forms and colors. Part of this information is then forwarded directly to the orbitofrontal cortex; another part of it goes to the thalamus and the cingulate cortex before it reaches the orbitofrontal cortex area. The upper or dorsal stream responds to spatial locations; it takes the pathway to the second level of the visual association cortex and the multimodal association cortex in the parietal lobe (Christian, 2008; Hass-Cohen & Loya, 2008; Kosslyn & Jacobs, 1994; Lusebrink, 2004). The multimodal association cortex is the structure that processes and forwards information to the prefrontal cortex, which coordinates the processes that are associated with attention, emotion, cognition, and action (Fuster, 2003).

Emotions involve patterns of autonomic activity as well as hormonal and cortical responses in the brain. Emotional processing first takes place in the amygdala, which is located in the subcortical limbic system. The amygdala has direct connections to the prefrontal cortex (Fuster, 2003) and indirect connections to the right orbitofrontal cortex through the thalamus. The thalamus is located at the posterior end of the forebrain where it receives all sensory information except smell. Input from the amygdala is modified by the hippocampus and two cortical structures, namely, the cingulate cortex and the orbitofrontal cortex (Hass-Cohen & Loya, 2008). The hippocampus is involved in forming long-term declarative memories; the anterior part of the cingulate cortex moderates emotional self-control and focused problem solving (Allman, Hakeem, Erwin, Nimchinsky, & Hof, 2001); and the posterior cingulate cortex responds to emotional words

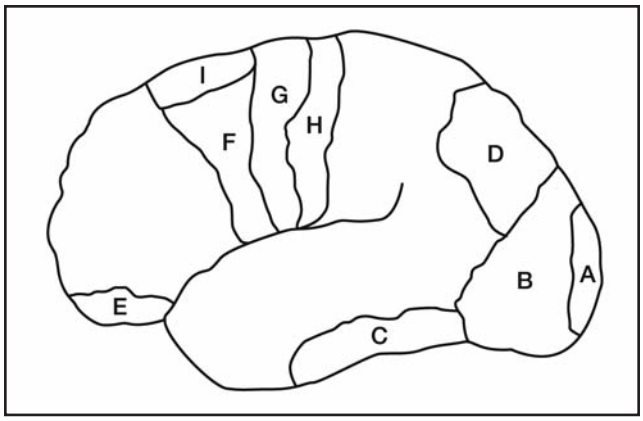

Figure 1
Left Hemisphere Predominant Areas in Visual Expressions (A = striate cortex; B = extrastriate cortex; C = inferior temporal cortex; D = second level visual association cortex in parietal lobe; E = orbitofrontal cortex; F = premotor cortex; G = primary motor cortex; H = primary somatosensory cortex; I = supplementary motor area)

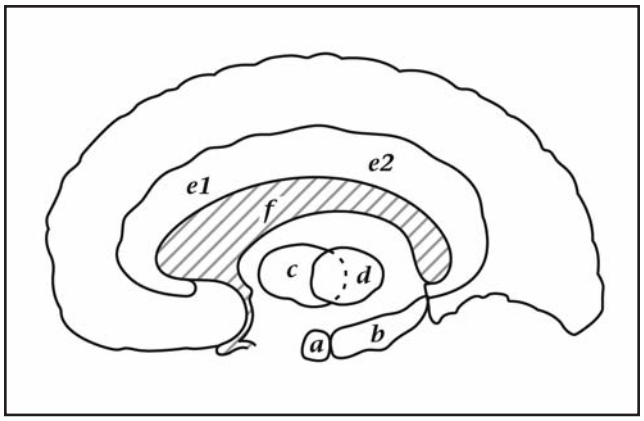

Figure 2
Subcortical Predominant Structures in Visual Expressions (Medial View) (*a* = amygdala; *b* = hippocampus; *c* = thalamus; *d* = basal ganglia; *e1* = anterior cingulate cortex; *e2* = posterior cingulated cortex; *f* = corpus callosum)

(Maddock, Garrett, & Buonocore, 2003), autobiographic memory, and other memory retrieval (Maddock, Garrett, & Buonocore, 2001). Complex emotions are integrated, interpreted, and regulated in the orbitofrontal cortex, which is associated with right hemispheric executive functions (Christian, 2008). The functions of the lateral or dorsolateral prefrontal cortex, by contrast, are biased toward left hemispheric functions and problem solving (Shore, 2001, as cited in Christian, 2008). Perceptual memory is stored in the posterior cortex, whereas executive memory is stored in the frontal cortex (Fuster, 2003).

Art therapy is an action-oriented therapy that, when using art media, involves movement of the hand. Such motor activity is processed in the primary motor cortex, premotor cortex, and prefrontal cortex. An important brain structure involved in processing movement is the basal ganglia, located in the forebrain (Hass-Cohen & Loya, 2008). The processing of movement involved in art activity takes a direct pathway between the motor association cortex and the somatosensory cortex—two areas that are also connected through the thalamus and the basal ganglia (Carlson, 2001).

Mental images are formed and processed along the same pathways and areas of the brain as the perceptions of external stimuli in corresponding sensory modalities (Horowitz, 1970). The presence of different mental images can be discerned by their concomitant psychophysiological responses. Imagery derived from imagination can involve several levels of information processing, depending on meaning and configuration, which differentiate it from other images in a particular modality (Lusebrink, 1990; Lusebrink & McGuigan, 1989). For example, with affectively neutral visual imagery, the overlap in neural networks between perception and imagery is more pronounced in the frontal and parietal regions than in the temporal and occipital regions (Ganis et al., 2004). According to Ganis et al., "cognitive processes function similarly in imagery and perception…but at least some sensory processes may be engaged differently by visual imagery and perception" (p. 239). For individuals with posttraumatic stress disorder, for example, affectively charged visual stimuli activate limbic regions and sensory areas of the cerebral cortex but not the prefrontal area (Hendler, Rotshtein, & Hadar, 2001).

This discussion, of course, presents a greatly simplified outline of brain functions and the areas involved in processing information. In art therapy visual expressions reflect, in general terms, the functions of different levels of visual information processing. The three levels of the Expressive Therapies Continuum (kinesthetic/sensory, perceptual/affective, and cognitive/symbolic) parallel the three hierarchical levels of sensory information processing in the occipital, temporal, and parietal lobes as outlined by Fuster (2003). Visual expressions involve complex sensory information from the parietal lobes that is forwarded, along with emotional input from the limbic area, to the prefrontal cortex with its regulatory functions (Fuster, 2003).

Assessment of the Levels of the ETC

In art therapy the execution of art experiences and expressions involve kinesthetic and sensory activities that are modulated by affective input and combined with basic cognitive mental operations. Assessment within the framework of the ETC addresses the predominance of one or more levels of sensory information processing depending on how certain formal elements present in an artwork are configured. These formal elements are similar to the ones laid out by the DDS (Cohen et al., 1988), the PPAT (Gantt & Tabone, 1998), and the Formal Elements of Visual Expression (Lusebrink, 1975), but instead of using rating scales this assessment uses descriptions of the visual elements present at each level of the ETC. The assessment is distinguished by its focus on clients' strengths and difficulties with information processing on each of the ETC levels

rather than on psychopathology associated with certain diagnostic categories. Client areas of strength indicate a lack of difficulty in processing visual information on particular levels of the ETC. These areas provide secure bases from which to explore other areas that may contain psychopathology or to address "missing links" in the sequence of visual information processing. Visual expressions based on secure areas of the ETC carry potential for the creative process to activate internal movement in affective and cognitive processes and thus bridge over areas of difficulties. Indications of clients' strengths in information processing at any level and their difficulties at other levels become guidelines for starting points, pathways, and goals in art therapy.

Table 1 provides a general overview of the predominant characteristics of visual expressions on each level of the ETC (Hinz, 2009; Lusebrink, 2008). The overview incorporates the formal elements utilized in the DDS, the PPAT, and the Formal Elements of Visual Expression assessments, as well as findings from the normative studies by Bucciarelli (2007) and St. John (2008) and studies cited earlier that examined psychopathological variations. These descriptions of formal elements on different levels of the ETC are based on my observations from more than 25 years as a practicing art therapist and art educator, supplemented by information gleaned from an extensive search of the research on the formal elements in art (e.g., Bernheim, 1964; Saint-Martin, 1987), children's drawings (e.g., Goodenough, 1928; Schmidl-Waehner, 1942), and psychopathology in the visual expressions associated with different diagnostic categories (e.g., Ahtik, 1971; Langevin, Raine, Day, & Waxer, 1975; Plokker, 1965; Prinzhorn, 1972; Volmat, 1956; Wadeson, 1980; Wadeson & Carpenter, 1976; Wiart, 1967), among other sources.

Each level of the ETC is described as a continuum between two opposite poles (Figure 3). The extreme pole of each level represents psychopathological variations found in visual expressions. These variations are presented without reference to any particular diagnostic category. Within the theoretical structure of the ETC, the area between any two poles is envisioned as one of creative transition that is a dynamic integration of the qualities represented by the two poles. Artistically creative visual expression can encompass the characteristics along the whole continuum spanning any level of the ETC. The following is a brief summary of the characteristics of each level of the ETC as they align theoretically with the different brain areas that appear to be involved in the processing on each level.

Kinesthetic/Sensory level. The Kinesthetic/Sensory (K/S) level represents simple motor expression with art media and their corresponding visual manifestations of energy and sensory involvement. An emphasis on kinesthetic activity decreases awareness of the sensory component of the expression, and emphasis on the sensory component decreases and slows down kinesthetic action because the focus is directed to the experience of sensations. The psychopathological variation of the K component is characterized by agitated actions and disregard for boundaries and limits, such as frantic scribbling, throwing or destruction of materials, or marked lack of energy. The K component appears to reflect the predominant involvement of the basal ganglia and the primary motor cortex of the brain.

The sensory component focuses attention on sensory exploration of materials, surfaces, and textures. The psychopathological variation of the S component is manifested in an over-absorption in the sensory experience, extreme sensory sensitivity, and marked slowing down of movement involved in the expression. The creative transition area of this ETC level encompasses kinesthetic expression integrated with sensory awareness of the movement involved in art making. The S component appears to reflect an emphasis of involvement of primary somato-sensory cortex.

Perceptual/Affective level. The perceptual component of the Perceptual/Affective (P/A) level focuses on forms and their differentiation. Perceptual visual expression processing is characterized by figure/ground differentiation whereby forms are defined by lines as boundaries and/or color to mark defined areas. The psychopathological variation of the P component manifests as disintegration of forms, incomplete forms, figure and ground reversal, geometrization of forms, and overemphasis of details or lack of details. Restricted affective involvement is characterized by very small forms, minimal or no color to define forms, and constricted use of space. The P component appears to reflect an emphasis on the processes of the ventral stream of visual information processing with its emphasis on differentiation and clarification of forms and shapes.

The affective component of the P/A level is characterized by increased involvement with and expression of affect, and affective modification of forms. The presence, differentiation, and change of affect are indicated by the increased use and variety of hues and their values. The psychopathological variation of the A component is marked by disintegration of form, indiscriminate mixing of color, clashing colors or colors inappropriate to the subject matter, interpenetration of forms and/or merging of figure and ground, and, especially, indiscriminate mixing of colors. The creative transition area of this ETC level encompasses good and/or differentiated gestalts, dynamic forms enlivened with color, and aesthetical ordering of forms. The A component appears to primarily reflect the processing of emotions in the amygdala and its influence on the ventral visual stream.

Cognitive/Symbolic level. The cognitive component of the Cognitive/Symbolic (C/Sy) level emphasizes cognitive operations. It is characterized by the cognitive integration of forms and lines leading to concept formation, categorization, problem solving, spatial differentiation and integration, word inclusion, differentiation of meaning of objective images, and abstractions. The psychopathological variation of the C component is characterized by disintegration of surface and spatial structure, illogical relations between forms, loss of conceptual meaning, and overinclusion of words. The C component appears to involve the regulatory "top-down" influences of the prefrontal cortex, especially the dorsolateral prefrontal cortex and possibly the anterior part of the cingulate cortex.

The symbolic component of the C/Sy level emphasizes global processing involving input from sensory and affective sources, autobiographic processing, and symbolic

TABLE 1
Predominant Characteristics of Visual Expressions on Different Levels of the Expressive Therapies Continuum

K = Kinesthetic level – emphasis on Kinesthetic expression and action **Kx** = Psychopathological variations		**CRk-s** = creative transition area	**S** = Sensory level – emphasis on sensations and sensory explorations **Sx** = Psychopathological variations	
Kx < ======== > Agitated scribbles Agitated throwing Disregard for limits Destruction of materials	**K < ======== >** Scribbling Stabbing Daubing Pitching	**CRk-s < ======== >** Dynamic kinesthetic expression with concurrent sensory feedback	**S < ======== >** Sensory explorations of materials and textures Sensory explorations of surfaces	**Sx** Absorption in sensory experience Stillness or very slow movements Avoidance of sensory experiences Lack of sensory integration
P = Perceptual level – emphasis on form and individual images **Px** = Psychopathological variations		**CRp-a** = creative transition area	**A** = Affective level – emphasis on affective expression **Ax** = Psychopathological variation	
Px < ======== > Geometrization of forms Incomplete forms (org.) Poorly integrated forms (org) Stereotypical images Predominance of outlines Overemphasis on details Lack of details Decreased or minimal use of space	**P < ======== >** Perceptual integration Form predominance Line/shape mixture Outline variation Shape variation Size variation Differentiation of details Adequate use of space	**CRp-a < ======== >** Good or complex gestalts Formal order of forms Aesthetical order of forms Dynamic forms Creative color use /blending Involvement in expression	**A < ======== >** Color use predominant Expressive use of color Affective/expressive forms Dynamic outlines Incomplete outlines Open forms Descriptive color	**Ax** Disintegration of color Disintegration of form Agitated forms Overtly clashing color Affective images as hallucinations Overly large forms Most space used
C = Cognitive level – emphasis on cognitive operations **Cx** = Psychopathological variations		**CRc-sy** = creative transition area	**Sy** = Symbolic level – emphasis on symbolic expression **Syx** = psychopathological variations	
Cx< ======== > Loss of conceptual meaning Surface structure disintegration Spatial disintegration Obscure abstractions Extreme poverty of images Rigid structures Illogical or incomplete relations between forms	**C < ======== >** Cognitive integration Concept formation Spatial integration Abstractions Problem solving Categorization Stepwise planning Objective meaning Pictographs Word inclusion	**CRc-sy < ======== >** Intuitive problem solving Self-discovery Spiritual search	**Sy < ======== >** Integrative symbolism Symbolic meaning Symbolic abstractions Symbolic use of color Intuitive concept formation Symbolic relationship between forms	**Syx** Over Identification with symbols Ideosyncratic symbolism Obscure symbolism Symbolic perception of reality Symbols of defenses

Note: The different columns are only descriptive examples of the particular components of the ETC and are not meant to be all inclusive or exclusive.

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expressions. It is characterized by the symbolic relationship and meaning of the affective images, the symbolic use of color, symbolic abstractions, and intuitive integrative concept formation. Large symbolic images may be associated with a loss of reflective distance (Lusebrink, 1990). The psychopathological variation of the Sy component is characterized by obscure or idiosyncratic meaning of symbols, overidentification with symbols, symbolic manifestations of defenses, and figure/ground reversal. The Sy component appears to primarily reflect the "top-down" processes of the orbitofrontal cortex and possibly the posterior part of the cingulate cortex. The integrative function of the orbitofrontal cortex includes the retrieval of autobiographical consciousness (Christian, 2008). The creative transition area between the cognitive and symbolic poles encompasses intuitive problem solving, images of self-discovery, and spiritual insight.

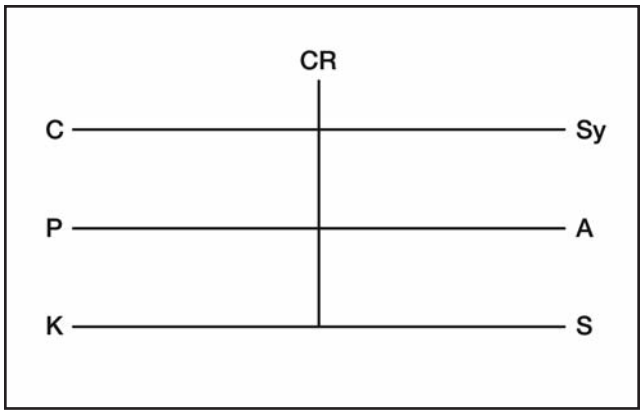

Figure 3 Schematic Representation of ETC (K-S Kinesthetic/Sensory level; P-A Perceptual/Affective level; C-Sy Cognitive/Symbolic level; CR Creative Axis)

Use of the ETC Levels in Therapy

The sequence in which an individual moves along the levels of the ETC can be conceptualized as reflecting increased complexity of visual information processing and corresponding brain structures and functions. Figure 3 is a diagram of the stepwise progression of these processes. The sequence of K/S → P/A → C/Sy suggests movement from the posterior to the anterior structures of the brain—or "back to front" cortical integration of sensory processes—and the "bottom-up" or limbic to cortical integration of emotional processes. The regulation of these processes in the cortex theoretically aligns with the sequence of C/Sy → P/A → K/S. This sequence also reflects possible steps in differentiating complex visual expressions and their underlying components in art therapy. The transitions between the sensory and affective processes in the limbic and associated areas of the prefrontal cortex reflect the vertical "bottom-up" connecting processes in the brain. The prefrontal cortex, in turn, regulates and coordinates the underlying limbic processes involving affect in a top-to-bottom direction (Fuster, 2003),

The horizontal transitions between the poles on any level of the ETC seem to indicate the involvement of the limbic structures (amygdala and thalamus) along with other structures. The transition between the K and S components reflects in theory the direct pathway between the motor association area and the somato-sensory association cortex. Another pathway between these two areas involves the basal ganglia via the thalamus (Carlson, 2001). This connection is important in reconstituting mental abilities via kinesthetic involvement with three-dimensional media (Menzen, 2001).

The transition between the P and A components may involve an increased and predominant involvement of the amygdala, which gives affective valence to visual processes. Visual images, in turn, provide form for affective expressions. The transition between the C and Sy components suggests that a decrease in the predominance of dorsolateral cortex functions and an increase in orbitofrontal cortex functions may be occurring. The processes in the anterior and posterior parts of the cingulate cortex differentiate, respectively, between involvement in emotional self-control and problem solving as opposed to processing emotions and memories (Allman et al., 2001). It seems possible that these two parts of the cingulate cortex reinforce the differences between the C and Sy components in the ETC.

The different levels of the ETC may be regarded as different yet interconnected systems reflecting the different brain processes and functions. As I previously have written, "the expression and interaction with media on the different levels of the ETC function as a whole and changes occurring on separate levels are interrelated" (Lusebrink, 1990, p. 113). Difficulties with a particular component of the ETC may indicate a disconnect between the systems or difficulties in transitioning between different areas of information processing. By the same reasoning, changes in imagery may reflect internal movement whereas repetitious or fixed, unchanging images likely represent areas of conflict or emotional rigidity.

Internal movement, as reflected in the changes in a client's imagery, may be enhanced in art therapy by changing visual expression on different levels of the ETC. Possible steps towards integrated functioning on the different levels, as well as interventions through the use of different media in art therapy, are based on the influences that media exert on expression. Generally the left-hand components of the ETC—namely the kinesthetic, perceptual, and cognitive components—seem to be enhanced through the use of resistive media, such as pencil, crayons, or markers (Hinz, 2009; Lusebrink, 1990). The right-hand components—the sensory, affective, and symbolic components—tend to be enhanced through the use of fluid media, such as poster paint, watercolor, or finger paint (Hinz, 2009; Lusebrink, 1990).

Media choices may enhance the change of ETC levels in visual expression, and possibly contribute to the changes in the pathways used in processing information due to the plasticity of the brain. Pascual-Leone (2006) asserted that "the brain undergoes continuous changes in response to modifications in its input afferents and output targets" (p. 315) and that "changes in activity across a distributed

neural network may be able to establish new patterns of brain activation and sustain function" (p. 317).

Visual expressions in art therapy not only reflect the predominant level(s) of the ETC present but also reveal the client's strengths or difficulties on that particular level. The client's strengths are shown in visual expressions that correspond with the normal descriptions on each particular level; this indicates that visual processes on that level are functioning appropriately and without a disconnect between components in that area. The client's weaknesses are displayed by visual expressions that may correspond with the descriptions of psychopathology on any level of the ETC and/or show perseveration on a particular level without changes in imagery.

Application of the Expressive Therapies Continuum as a guiding framework in art therapy has been addressed at length and elaborated for each level of the ETC by Hinz (2009). She proposed that the predominant level may be assessed with a series of at least three free art expressions made by a client using a free choice of media, ranging from resistive to fluid. The predominant level in a client's artwork may be chosen as a starting point in therapy, under the assumption that the client feels relatively comfortable on this level of expression and would likely experience the least resistance. If the predominant level coincides with the client's strengths, this entry point would provide a solid foundation from which to proceed in dealing with the weaknesses and/or psychopathology displayed on other levels of the ETC. If the predominant level in the art expression displays weakness or psychopathology, steps would need to be taken to reinforce those levels that reflect the client's strengths. Weaknesses should be explored gradually using different media to enhance the vertical and/or horizontal transitions between the levels and the components of the ETC.

The schematic representation of the ETC (Figure 3) can be viewed as a ladder upon which the client's visual expressions, and correspondingly his or her functioning, can move from lower levels to higher levels and vice versa. This schema also can be used to chart the levels of visual expression occurring in therapy. Although the ETC directly addresses the use of media in art therapy, it can be used concurrently with other approaches to psychotherapy that address the corresponding levels of the ETC (Hinz, 2009).

Case Example of ETC Levels Using Different Media

Betty (pseudonym) was an 8-year-old girl who was seen weekly for 3 months by an art therapist at a children's mental health clinic. Her presenting problem was separation anxiety that had begun 2 months earlier when her mother gave birth to a baby boy. Betty was well groomed but controlled and guarded in her verbalizations. In the art therapy sessions she was overly concerned about getting her dress dirty, and pulled at the hem of her dress whenever she became anxious.

Although other therapeutic techniques could be discussed, the focus here is on selected visual expressions that Betty produced in the therapy sessions. Betty chose crayons and drew two tall buildings with many windows for her initial drawing, which she named "The Hospital" (Figure 4). The manner of drawing was controlled and showed a tendency toward perseveration in the depiction of the windows and in the compact and controlled coloring of the walls between the windows. This drawing predominantly involves the cognitive component of the C/Sy level due to the fact that the paper base of the buildings provides an environment and relationship between the buildings. Therefore, instead of encouraging more cognitive work, the therapist based her next directions on her observation of the controlled way Betty had colored the buildings.

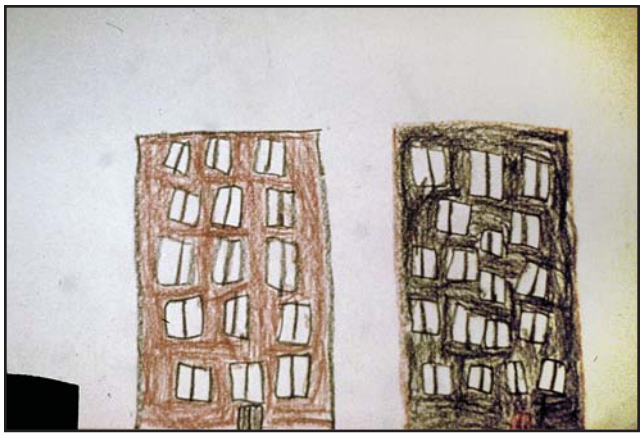

Figure 4 "The Hospital"

Figure 5 Scribble Chase

In the following session the art therapist suggested a scribble using crayons (Figure 5) in order to give Betty an opportunity to lessen some of her control and to express or act out her feelings through kinesthetic activity. Betty pursued the scribble vigorously, choosing a red color that suggested suppressed anger. When asked to find, outline, and name objects within the scribble, Betty found a helicopter, which she outlined in black and colored in with red; she also found some small elongated objects, one of which she named a "knife." This exercise supports the kinesthetic area of the K/S level, followed by forming shapes from ambiguous stimuli and drawing these objects as aligned with the

Figure 6 Elaboration on Scribble Chase

Figure 7 "Liberty Bell"

perceptual area of the P/A level. The art therapist then asked Betty to draw a picture incorporating the objects from her scribble drawing. Betty drew isolated images of a helicopter, a knife, and a Christmas tree.

Charting the above interaction on the schematic template of the ETC (Figure 8) indicates that Betty's visual expressions showed some strength in the areas of C and K, and also P, but her weakness was in integrating the separate objects into a coherent whole. It appears that Betty had difficulties with the A component of the P/A level, which was corroborated by her controlled verbal expressions of affect.

The art therapist next offered Betty the fluid medium of poster paints to enhance affective expression. In response to the directive to paint images of things she feared, Betty painted a snake, a spider, a cat, a school principal, and an undifferentiated blob-like "mouse." She explained that she was afraid of the principal who yelled. The lack of organization of the images into a coherent picture again indicated that Betty's expression was predominantly perceptual, even though three of the images had possible symbolic affective meaning.

Betty was next asked to cut out the images and to make a story after pasting them on a separate sheet of paper. In this process the images still remained isolated, but the mouse and the principal were grounded in the middle

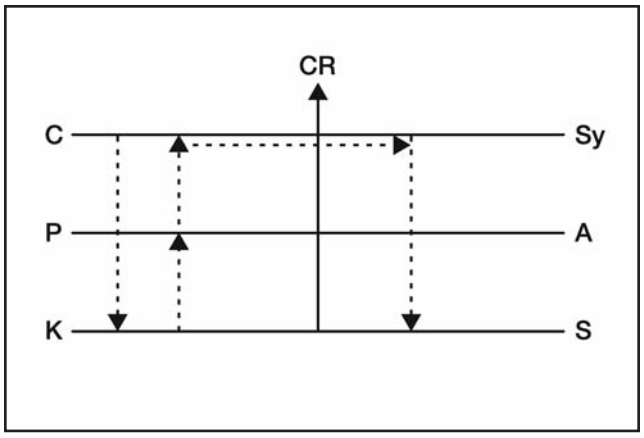

Figure 8 Schematic Representation of Betty's Sequence of Visual Expressions on the ETC

of the lower edge of the paper (Figure 6). Betty stated that her mother was afraid of spiders and snakes, but she had no comments about the other images. The rationale for this directive was to retreat to a resistive medium, cutting and pasting, to give Betty control while staying with the same images. The paper-based placement of the principal and the mouse indicate a direction toward cognitive processing on the C/Sy level. The random placement of the images with possible affective and symbolic meaning (spider and snake), however, is predominantly still on the P/A level and the images are static.

At this point the art therapist decided that Betty felt comfortable enough to share her feelings about her family, because she had talked about her mother's fears. Betty used crayons to draw a picture of her family, covering almost the whole page to represent three levels of the house in an X-ray view. Three characteristics stood out in the drawing: compartmentalization, isolation of the family members (except for the mother and father who were drawn together), and the large size of the mother and her shoes. The image also implied emotions (yelling) and a depressive mood implied by a black area above the house. This drawing (not pictured) involved the cognitive area of the C/Sy level as it was drawn in a schematic manner (with an X-ray view of the house). References to the P/A level were implied indirectly.

In the following session the art therapist introduced finger paints as a fluid medium on the K/S and/or P/A level that would give Betty a chance to express herself and elaborate on her images using the sensory area of expression. Initially, Betty was concerned about getting the paints on her dress and she used them very gingerly with just one finger, washing her hands after each color. Her first two finger paintings were a blue and red schematic rendering of the U.S. flag and an image of a bell delineated by a finger stroke in the wet paint (Figure 7). Betty's verbal comment on the "Liberty Bell" was that it meant "liberty for all." Her third painting was a large "Basket of Cherries."

All three finger paintings engaged the sensory component of the K/S level. The first painting was also on the C/Sy level and, along with the third picture, indicated some compulsive tendencies in the manner of painting.

The second painting, "Liberty Bell," displays an aerial perspective and appears to reflect the creative transition point between the Perceptual and Affective poles of that level with the emergence of the symbolic area of the C/Sy level. The third painting, "Basket of Cherries," as implied by its size and image, indicated the symbolic area of the C/Sy level and possibly the containing quality of the therapeutic relationship. Betty was pleased and satisfied with all of her finger paintings.

The sequence of visual expressions and their changes in the levels of the ETC are represented in Figure 8 except for the last finger paintings, which implied the symbolic component of the C/Sy level. The stepwise transitions between the different levels and poles of the ETC were facilitated partially through the change in media and directives, thus avoiding perseveration on a particular level or pole of the ETC. These stepwise changes involving kinesthetic and sensory modalities resulted in changes in the process of creating the visual expression and in the images produced, implying that an inner movement had occurred in Betty's brain functions that processed visual and other information.

Conclusion

Art therapy accesses sensory and affective processes on basic levels that are not available for verbal processing. Experiences, images, thoughts, and feelings are expressed using formal art elements and their variations in different combinations. These configurations present the meaning of the expression and also reflect the strengths and weaknesses or possible psychopathology of the artist. The different formal elements present in a visual expression can help to differentiate the Kinesthetic/Sensory, Perceptual/Affective, and Cognitive/Symbolic levels of the Expressive Therapies Continuum. Each of the levels, in their increased complexity, reflects in turn the increased complexity of visual and affective information and theoretically parallels different structures and functions of the brain. The schematic representation of the ETC can assist in stepwise planning of interventions based on media use in art therapy and their value in stimulating the brain structures involved in processing information.

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