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Art Therapy: Journal of the American Art Therapy Association

Publication details, including instructions for authors and subscription information: http://www.tandfonline.com/loi/uart20

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To cite this article: Maureen Batza Morris MA (1995) The Diagnostic Drawing Series and the Tree Rating Scale: An Isomorphic Representation of Multiple Personality Disorder, Major Depression, and Schizophrenia Populations, Art Therapy: Journal of the American Art Therapy Association, 12:2, 118-128, DOI: <u>10.1080/07421656.1995.10759142</u>

To link to this article: http://dx.doi.org/10.1080/07421656.1995.10759142

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The Diagnostic Drawing Series and the Tree Rating Scale: An Isomorphic Representation of Multiple Personality Disorder, Major Depression, and Schizophrenia Populations

Maureen Batza Morris, MA, Washington, DC

Abstract

This pilot study used the Diagnostic Drawing Series (Cohen, Hammer, & Singer, 1988) and the Tree Rating Scale (Creekmore, 1989) as a means to research isomorphic representations in tree drawings. The tree drawings of 80 subjects, 20 of whom were diagnosed with Multiple Personality Disorder, 20 with Schizophrenia, 20 with Major Depression, and 20 in the Control population, were rated. Patterns which emerged within each diagnostic category were examined, and graphs were used to depict the results. Certain features were found to distinguish each diagnostic category. The descriptive statistical findings were both consistent and inconsistent with earlier Diagnostic Drawing Series research findings (Cohen, Hammer, & Singer, 1988; Creekmore, 1989; Kress, 1991, 1992; Mills, 1989; Mills & Cohen, 1993; Rankin, 1994; Torem, Gilbertson, & Light, 1990).

Introduction

Throughout history, the tree has continued to be one of the most central and consistently used symbols. This universal metaphor depicting human development is used in virtually every religion and in myths, rituals, legends, sacred literature, art, poetry, and dreams. Greek mythological associations include the pine tree with Attis, the cedar tree with Osiris, and the oak tree with Apollo to name but a few. Nordic mythology cites the Cosmic World Tree, Yggdrasil. The Celtic (oak), Scandinavian (ash), and German (lime) heritages specify the use of the tree as a traditional symbol. Within religious realms, Christians refer to the Garden of Eden whose center contains the Tree of Knowledge, while Judaic tradition points to the Tree of Life in the City of New Jerusalem of Apocalypse as a central symbol. More recently, Dante portrays the pattern of celestial sphere as foliage of a tree whose roots spread upwards.

With a greater appreciation and deeper knowledge of the cultural, religious, and mythical implications of the tree metaphor, many authors contend that the tree symbol facilitates the deepest tapping of the psyche (Cohen, Hammer, & Singer, 1988). Hammer (1958) hypothesizes that in the process of drawing the tree, the individual creates a self portrait which is a projection of the self. Others assert that the tree serves as an inanimate object upon which it is easier to attribute a greater amount of less desirable personality traits (Burns, 1987). From a Jungian standpoint, the tree represents the

persona. In an attempt to further understand the symbolic meaning of the tree, Jung suggests that "if the mandala may be described as a symbol of self seen in cross section, then the tree would represent a profile view of the self depicted as a process of growth" (Jung, 1954/1967, p. 253). In addition, Plokker (1962) describes the tree as a symbolic representation of one's own personality. Thus, in a variety of ways, the tree can be seen as a graphic representation of the inner self.

While the tree is viewed as a symbol in mythology and religion and a metaphor for one's own personality, the nurturing aspect of the tree is asserted by Koch (1952) as he speaks of the tree as an "embryonal house". The nurturing aspect of the tree is viewed in another context as a representation of the feminine principle (Cooper, 1978), which possesses the nurturing, protecting, and sheltering qualities of the Great Mother. Just as the Great Mother and "embryonal house" are depicted as nurturing, so too might the idealized image of the self-concept be depicted as nurturing.

Although the tree historically has been viewed as a metaphor for development, the use of tree drawings as graphic indicators of self-concept and potential clinical indicators did not emerge until the 20th century. Decades after French and German psychiatrists asserted the use of art as a diagnostic tool, Buck and Hammer introduced the House-Tree-Person (H-T-P) drawings as a means to facilitate freer verbalizations (Buck, 1948; Buck & Hammer, 1969). At the same time, Jucker developed and advanced the projective capabilities of the free drawing of the tree (Hammer, 1958). This projective device was further developed by Koch (1952), a student of Jucker, into a projective instrument to capture the total personality in its deeper layers of being. The clinical applications of the H-T-P were expanded in later research (Burns, 1987; Burns & Kaufman, 1972; Hammer, 1958; Jolles, 1964).

Within the past decades, tree drawings have been examined and analyzed in relation to a variety of diagnostic populations. Read (1931) assessed a series of trees drawn by children to determine the mode of plastic expression. In the study of a young schizophrenic female, Plokker (1962) analyzed the tree drawing in terms of graphic correlations with diagnostic symptoms. Specifically, he cites the lineation, positioning, and relationship of parts as indicators of this particular pathology. Dax (1965) used tree drawings to aid in providing a pictorial representation of depression. In each of these studies, the tree theme was utilized and explored as a diagnostic tool.

According to Arnheim, as the notions of the brain do not deviate from the thoughts to which they are tied, the artwork is indicative of isomorphic representations (Arnheim, 1986). In this manner, the creative processes and products can be viewed as outward expressions and manifestations of internal states. In an effort to understand the meaning of the artwork and the creator of the artwork, individual characteristics of tree drawings have been examined and explained in divergent interpretive studies. Buck (1948) and Hammer (1958) suggest that the trunk depicted within the tree drawing represents the subject's feelings of energy, growth, development, and ego strength. Bollander suggests that the trunk portrays the subject's internal relation to the emotional functions (1977). Numerous investigators specify that a scar, knothole, or broken branch graphically depicted on the tree is reflective of a traumatic event experienced by the subject (Bollander, 1977; Buck, 1948; Hammer, 1958; Rankin, 1994; Torem, Gilbertson, & Light, 1990).

In a similar manner, additional individual characteristics of the tree have been studied. According to Jolles (1964), the existence of falling or fallen apples suggests feelings of rejection or guilt. Jolles further states that broken bark represents a stormy, difficult history, while a heavily drawn bark suggests anxiety (1964). According to Burns, branches drawn in complete symmetry in a detailed manner indicate a compulsive need for control (1987). Branches which are broken or cut off suggest feelings of trauma and/or castration (Hammer, 1968; Jolles, 1964). Branches with large leaves suggest dependency associated with feelings of inadequacy (Burns & Kaufman, 1972; Burns, 1987; Jolles, 1964). According to Jungian psychology, the roots are an expression of the unconscious (Plokker, 1962). In addition, an emphasis upon the roots suggests attention to the past (Burns, 1987).

Although a breakdown of component parts is useful for examining details, an integration of these parts toward a holistic view of the drawing and of the subject is imperative. It is the author's opinion that these parts must be seen as an integral part of a whole, an integral part of the total self.

Existing research using the Diagnostic Drawing Series (DDS) has primarily focused on establishing objective correlations between structural components of artistic expression and psychiatric diagnosis. Normative studies have produced data to establish standards in the following diagnostic groups: Alzheimer's (Knapp, 1994); Borderline Personality Disorder (Mills, 1989); Depression in children and adolescents (Gulbro-Leavitt & Schimmel, 1991); Eating Disorders (Kessler, 1994); Major Depression, Dysthymia, Schizophrenia, and Multiple Personality Disorder (Cohen, Hammer, & Singer, 1988); Multiple Personality Disorder (MPD) (Kress, 1991, 1992; Mills & Cohen, 1993); and Organic Mental Syndrome (Couch, 1992, 1994). Specifically, tree drawings are collected and assessed as the second drawing within the DDS.

Creekmore designed the Tree Rating Scale to provide a more in-depth examination of the detailed aspects of tree drawing, which appeared to be lacking in the DDS Rating Guide (Cohen, 1986; Creekmore, 1989). In doing so, Creekmore rated the tree drawings of the following populations: Control; Depression; Schizophrenia. In 1992, Kress modified the Tree Rating Scale to provide an even closer examination of the formal characteristics and content of the tree drawing.

In view of the historical significance and personal implications of tree drawings, the present pilot study attempted to provide a deeper understanding and validation of tree symbolism, the DDS, and the Tree Rating Scale. It served to augment the perception of the tree as a self-concept depicted within specified psychiatric diagnoses (Multiple Personality Disorder, Schizophrenia, and Major Depression populations) and a Control group. Ultimately, this study provided data used to highlight the possible emergence of an isomorphic pattern.

Through the collection and assessment of this information, the author expected to see patterns of isomorphic representations within each diagnosis. These patterns would be reflected within the graphic content and formal graphic qualities of each tree drawing. Specifically, the tree drawings within each category were expected to reflect the divergent graphic depictions of self-concept for each diagnostic grouping.

Method

Subjects

The sample population was comprised of persons diagnosed with Multiple Personality Disorder, Major Depression, and Schizophrenia, and a Control group. Specifically, the sample population consisted of 80 subjects, 20 in each diagnostic category. The Control group included six males and 14 females, and the average age for this group was 38.6. The Multiple Personality Disorder (MPD) group consisted of one male and 19 females, and the average age was 34.65. Within the Major Depression group, there were eight males and 12 females whose average age was 41.55. Lastly, the Schizophrenia group consisted of 11 males and nine females, whose average age was 28.05. Each of the sample populations was taken from the DDS Archive.

Procedure

The present research served as a continuum for the study of tree drawings. Creekmore (1989) and Kress (1992) examined in great detail the tree drawings of specific diagnostic populations. My decision to use the Tree Rating Scale was based upon the scale's focus on formal as well as content considerations within the drawings. This pilot study incorporated the Tree Rating Scale into the assessment and interpretation of the second drawing of the DDS. The DDS was chosen for its consistent standards and research design.

Eighty drawings were collected from within 80 DDS. Specifically, the drawing represents each subject's response to the following directive: "Draw a picture of a tree." Only the second drawing in the series was rated. Trees depicted in the first and/or third drawing were not considered for this particular study. Each of the 80 second drawings acquired from the DDS Archive was rated according to the Tree Rating Scale. In addition, data on the age and sex of each subject was collected. Lastly, descriptive statistics in the form of percentage data were generated from within each category and each diagnostic group. Graphs were created to depict findings.*

^{*}Gratitude is expressed to Michelle Batza Railey for her assistance in the design of the graphs.

Materials

The present pilot study called for the use of the Tree Rating Scale, modified by Kress, in association with the DDS (see Appendix A). Specifically, the Tree Rating Scale was used to assess and interpret the second drawing of the series which illustrates the directive, "Draw a picture of a tree." This scale examined the following formal characteristics and content within the tree drawing: space usage, page orientation, color usage, idiosyncratic color usage, use of line and/or shape, line quality/pressure, depiction of a landscape, inclusion of flowers, inclusion of animals, tilt, inclusion of writing, integrated tree versus disintegrated tree, ground depiction, leaves, root emphasis, inclusion of knothole, inclusion of swing, unusual placement, inclusion of people, depiction of blood, more than one tree depicted. To properly understand these characteristics, the reader should refer directly to the DDS Rating Guide and the Tree Rating Scale Definitions (see Appendix B).

Results

In an effort to comprehend the results of the research, it is necessary and more effective to view the results in terms of comparative categories between diagnostic and control groupings. As illustrated by the graphs presented, some distinguishing percentage differences emerged among the four populations. Conversely, in many categories the percentages among the populations were too similar to provide a comparison. Caution must be exercised because the percentages provided in this study are descriptive statistics. While these numbers can be compared to other research findings, they are not necessarily statistically significant. While the results of each category will be examined, greater emphasis will be placed on the specific categories which produced distinguishing differences among populations.

The first category examines the use of space (see Figure 1). Within the "space usage" category, the cluster of usage appears to be in the 33% to 66% range. While 55% of the Control, 45% of the Major Depression, 60% of the MPD, and 60% of the Schizophrenia subjects used 33% to 66%, a limited percentage of subjects within some diagnostic groupings used the 0% to 32% or full usage. Specifically, 0% of the Control



Figure 1. Space Usage Within Tree Drawings

and Major Depression subjects, 15% of the MPD subjects, and 5% of the Schizophrenia subjects used 0% to 32% of the paper. It can be noted that a low percentage of all of the subjects except Schizophrenia used the full page. At the same time, a similarly low percentage of subjects within each population used 67% to 99% of the paper.

Next, the placement of the paper was examined within the "orientation of paper" category (see Figure 2). Within this category, both the Control and Major Depression groups produced results that indicate little difference in preference for the use of a horizontal or vertical orientation of the paper. At the same time, a high percentage of the Schizophrenia sample (85%) chose a horizontal orientation, while 65% of the MPD sample chose a horizontal orientation.



Figure 2. Orientation of Paper Within Tree Drawings

The use of color was explored next (see Figure 3). In terms of the amount of color used within the drawings, a high percentage of the Major Depression (65%), MPD (65%), and Schizophrenia (75%) subjects used two to three colors. Results indicate that 50% of the Control used four or more colors, and 40% used two to three colors. A small percentage of the Control (10%), Major Depression (10%), MPD (20%), and Schizophrenia (15%) samples used only one color.

The use of line and shape was investigated next (see Figure 4). The "line and shape usage" category produced noteworthy results. A large percentage of the Control (80%) and Major Depression (60%) subjects used both line and shape



Figure 3. Color Usage Within Tree Drawings

within the drawing. Conversely, 75% of both MPD and Schizophrenia subjects used line only. Interestingly, shape only was used exclusively by 5% of the Major Depression subjects.

The "ground depiction" category provides notable results (see Figure 5). A substantial percentage of the Major Depression sample (55%) used the base of the paper as an implied groundline. The majority of the MPD sample (70%) depicted the tree as floating. The Schizophrenia sample was varied in its results as 30% used a line to represent the ground, and



Figure 4. Line and Shape Usage Within Tree Drawings



Figure 5. Ground Depiction Within Tree Drawings



Figure 6. Leaf Depiction Within Tree Drawings

45% depicted the tree as floating. In addition, the Control sample was varied in its results. The Control group used a line, line/shape, and paper base 20% each, while 30% used a shape only and 10% depicted the tree as floating.

The use of leaves was examined in the "leaves" category (see Figure 6). The Control and Major Depression group provided similar results in that 70% of the Control and 75% of the Major Depression subjects depicted no leaves on the tree. Similarly, 95% of the Schizophrenia and MPD samples depicted no leaves on the tree. It is worth noting that falling leaves were depicted exclusively by the Major Depression sample (25%). In addition, while leaf emphasis was depicted considerably by the Control sample (30%), only 5% of the MPD sample depicted leaf emphasis.

Next, the "root emphasis" category examined the depiction of the tree's roots (see Figure 7). A large majority of the Control (70%), MPD (90%), and Schizophrenia (100%) subjects did not graphically emphasize the root system of the tree drawing. While 65% of the Major Depression subjects and 70% of the Control did not emphasize the roots, 35% of the Major Depression and 30% of the Control populations did emphasize the roots.

Within the "presence of knothole" category, the Major Depression sample (40%) and Schizophrenia sample (30%) depicted a knothole on the tree (see Figure 8). In contrast, the percentage for a knothole depicted was considerably lower for the Control sample (10%) and MPD sample (15%).



Figure 7. Root Emphasis Within Tree Drawings



Figure 8. Presence of Knothole Within Tree Drawings

The "unusual placement" category assesses the placement of the tree image on the paper (see Figure 9). The Control sample and Major Depression sample both demonstrated no unusual placement 95% of the opportunities given. Similarly, 85% of the Schizophrenia sample demonstrated no unusual placement. In contrast, 30% of the MPD sample placed their tree to the left of the vertical axis, as well as the 5% of the Major Depression sample who unusually placed trees.

The "integrated versus disintegrated" category classifies each tree as either integrated (fruit, evergreen, palm, willow, or deciduous) or disintegrated (unrecognizable, chaotic branch, without branches, minimal trunk, falling apart, impoverished, broken branches, cut down, or dead). While 85% of the Control sample created an integrated tree, 65% of the Major Depression, 80% of the MPD, and 65% of the Schizophrenia samples created disintegrated trees (see Figure 10).

Specifically within the "disintegrated tree" category, 32% of the MPD subjects created trees classified as "falling apart" and 26% created trees with "chaotic branch systems" (see Figure 11). A majority of the disintegrated trees created by the Major Depression sample (40%) were classified as having "chaotic branch systems" (see Figure 12). A noteworthy percentage (75%) of the Control sample's disintegrated trees were rated as "falling apart" (see Figure 13). Lastly, the Schizophrenia sample created disintegrated trees in which 28% were "impoverished" and 22% had "chaotic branch systems" (see Figure 14).





Figure 10. Integrated Versus Disintegrated Tree Depiction

Within the "integrated tree" category, the majority of the Control group created "fruit" (41%) or "willow" (35%) trees (see Figure 15). As 20% of the MPD sample created integrated trees, the majority of these trees were classified as "deciduous" (57%) (see Figure 16). While 35% of both Schizophrenia and Major Depression sample groups depicted integrated trees, 40% of the Major Depression sample depicted "evergreen" trees and 43% of the Schizophrenia sample depicted "fruit" trees (see Figures 17 and 18).



Figure 11. Disintegrated Tree Depiction (Multiple Personality Disorder)



Figure 12. DisIntegrated Tree Depiction (Major Depression)



Figure 13. Disintegrated Tree Depiction (Control)



Figure 14. Disintegrated Tree Depiction (Schizophrenia)



Figure 15. Integrated Tree Depiction (Control)



Figure 16. Integrated Tree Depiction (Multiple Personality Disorder)

Finally, the following categories provided data whose results were similar for all of the sample populations: "idiosyncratic color usage," "line quality pressure," "flowers," "animals," "tilt," "writing," "swing," "people," "blood," and "more than one tree." Only one subject, a Schizophrenic subject, used idiosyncratic color. The results indicate that at least 80% of each population used a medium line quality pressure. The only deviation emerged within the MPD sample of which 20% employed heavy line quality pressure. Among all of the



Figure 17. Integrated Tree Depiction (Schizophrenia)



Figure 18. Integrated Tree Depiction (Major Depression)

sample populations, at least 90% consistently responded by not including flowers, animals, tilt, writing, swing, people, blood, or more than one tree within the 80 drawings.

Discussion

The results of this pilot study can be interpreted in a variety of ways. Several distinguishing patterns emerged among the four sample populations. These patterns can be examined in terms of external manifestations of the internal states of each diagnostic population.

The Control group can be set apart from the other sample populations in several categories. Predominately, the results indicate that the Control group characteristically used four or more colors, a mixture of line and shape, variety in ground depiction, and created the largest percentage of integrated trees. In addition, the Control group did not depict knotholes or emphasize roots. Several elements that appear prominently in the Control group's tree drawings are consistent with previous research results. Mills & Cohen (1993) and Creekmore (1989) reported the tendency for the Control population to include a groundline, use two or more colors, use a mixture of line and shape, and possess a tendency to create integrated trees. Conversely, Creekmore reported a predominant use of 67% to 99% or full space usage, which is inconsistent with this study's findings. Despite these differences, it is helpful to look at these results as a reflection of individuals who present as integrated selves, energetic, untraumatized, and grounded.

The Multiple Personality Disorder sample characteristically used a larger number of colors, a paperbased ground line, root emphasis, and the inclusion of knotholes. These results are consistent with previous research findings (Kress 1991, 1992; Mills & Cohen 1993; Rankin, 1994). In addition, these results coincide with research that relates knotholes to trauma experienced by the subject (Rankin, 1994; Torem, Gilbertson, & Light, 1990). It is necessary to note that the rating scale used in this study did not include a way to score mutation and scarification seen in previous DDS research. The findings of this study, however, imply a damaged tree was often drawn. In this manner, the results of this study and others provide artwork which might generate an image of a damaged, but energetic, individual resting on the outer edges of the paper.

The Major Depression sample characteristically used an average coverage of the paper, two to three colors, line only, unusual placement, and depicted a floating tree image and no disintegrated tree with a chaotic branch system. A preference for the use of line only, two to three colors, and a depiction of a disintegrated tree is consistent with previous research (Creekmore, 1989). In contrast, unusual placement was cited by Cohen, Hammer, and Singer (1988) as a main characteristic of the Major Depression population sample. To analyze this data, it is beneficial to examine the art in terms of conveying intense affect, sadness, isolation, despair, and weak lines. By doing so, a sense of the depressed self emerges.

Lastly, the Schizophrenia sample characteristically used an average amount of space on the page, two to three colors, line only, no unusual placement, and depicted knotholes and disintegrated trees which were impoverished and had chaotic branch systems. The use of one color is consistent with Creekmore's results (Creekmore, 1989). The results fail to support the inclusion of writing and use of idiosyncratic color reported by Cohen, Hammer, and Singer (1988). Nonetheless, the sense of self depicted by this sample population is indicative of a fragmented and impoverished self-concept.

Conclusion

The significance of this preliminary study lies in its implications for expanding the perception of the tree drawing as a manifestation of the inner self. The tree drawings created by the four diagnostic categories appear to offer an indication of the inner state of each individual. A tree that was untraumatized, integrated, colorful, and grounded was characteristic of the Control sample's tree drawings in this study. The tree drawings of the Multiple Personality Disorder sample generated an image of a grounded, usually well-rooted and colorful, but traumatized tree. The tree drawings of the Major Depression sample conveyed an image of a floating, unusually placed, and disintegrated tree drawn in few colors. Lastly, the Schizophrenia sample was characterized by the creation of an impoverished and disintegrated tree, drawn in few colors, and in line only. In this manner, the patterns of isomorphic representations found in this study provide insight

into the relationship between pictorial structure and psychiatric diagnosis.

This pilot study has provoked many questions and concerns. Expansion and modification of this preliminary study should be considered by future researchers. The Tree Rating Scale might be modified further to more accurately score observations cited by previous research. Specifically, it would be helpful to score a category relating scarification and mutilation. In addition, it would be beneficial to match the ratio of male to female samples and age averages more closely. Lastly, as the author rated the pictures herself, this must be viewed as a limitation; therefore, an inter-rater reliability test of the Tree Rating Scale is necessary. Despite these limitations, through this pilot study the author hopes to inspire others to become involved in research within the field of art therapy.

Editor's note: I gratefully appreciate the assistance of Anne Mills, MA, A.T.R. and Mary-Michola Barnes, MA, A.T.R. at the Diagnostic Drawing Series Archive, and the collection of DDS by Dorothy A. Anderson, MS, A.T.R.; Leta Hunt; Theresa Kress, MA; Pam Manner, MA, A.T.R.; Mike Marshall, MA, A.T.R.; Gil Silverman, MA, A.T.R.; and Carol Y. Werne.

References

- Arnheim, R. (1986). New essays on the psychology of art. Berkeley, CA: University of California Press.
- Bollander, K. (1977). Assessing personalities through tree drawings. New York: Basic Books.
- Buck, J. N. (1948). The H-T-P test. Journal of Clinical Psychology, 4, 151–159.
- Buck, J. N., & Hammer, J. S. (Eds.). (1969). Advances in House-Tree-Person techniques: Variations and applications. Los Angeles, CA: Western Psychological Services.
- Burns, R. C. (1987). Kinetic-House-Tree-Person drawings (K-H-T-P): An interpretive manual. New York: Brunner/Mazel.
- Burns, R. C., & Kaufman, S. H. (1972). Actions, styles, and symbols in Kinetic Family Drawings (K-F-D): An interpretive manual. New York: Brunner/Mazel.
- Cohen, B., Hammer, J. S., & Singer, S. (1988). The Diagnostic Drawing Series: A systematic approach to art therapy evaluation and research. *The Arts in Psychotherapy*, 15, 11-21.
- Cooper, J. C. (1978). An illustrated encyclopedia of traditional symbols. London: Thames & Hudson.
- Couch, J. B. (1992). Organic mental syndrome: Diagnostic Drawing Series research with the elderly (Cassette Recording No. 16). Las Vegas, NV: American Art Therapy Association.
- Couch, J. B. (1994). Diagnostic Drawing Series research with older people diagnosed with organic mental syndromes and disorders. Art Therapy: Journal of the American Art Therapy Association: 11(2), 111-115.
- Creekmore, J. (1989). The Diagnostic Drawing Series tree rating scale. Unpublished manuscript.
- Dax, C. (1953). Experimental studies in psychiatric art. Philadelphia: J. B. Lippincott.
- Gulbro-Leavitt, C., & Schimmel, B. (1991). Brief report: Assessing depression in children and adolescents using the Diagnostic Drawing Series modified for children (DDS-C). The Arts in Psychotherapy, 18(4), 353-356.
- Hammer, E. F. (1958). The clinical application of projective drawings. Springfield, IL: Charles C Thomas.
- Hammer, E. F. (1968). Projective drawings. In A. I. Rabin (Ed.), Projective techniques in personality assessment, (pp. 366–396). New York: Springer.

- Jolles, I. (1964). A catalogue for the qualitative interpretation of the H-T-P. Los Angeles: Western Psychological Services.
- Jung, C. G. (1967). The philosophical tree. In H. Read, M. Fordham, G. Adler, W. McGuire & R. F. C. Hull (Eds. and Trans.), *The collected works of C. G. Jung* (Vol. 13, pp. 251-349). Princeton: Princeton University Press. (Original work published 1954).
- Kessler, K. (1994). A study of the Diagnostic Drawing Series with eating disordered patients. Art Therapy: Journal of the American Art Therapy Association, 11(2), 116–118.
- Knapp, N. M. (1994). Research with the Diagnostic Drawing Series for normal and Alzheimer subjects. Art Therapy: Journal of the American Art Therapy Association, 11(2), 131–138.
- Kock, C. (1952). The tree test. New York: Grune & Stratton.
- Kress, T. (1991). A study of the content of drawings from the Diagnostic Drawing Series of patients with multiple personality disorder. Unpublished manuscript. The George Washington University, Graduate Program in Art Therapy, Washington, DC.
- Kress, T. (Speaker). (1992). The Diagnostic Drawing Series and multiple personality disorder: A validation study (Cassette Recording No. 55). Denver, CO: National Audio Video.

- Mills, A. (1989). A statistical study of the formal aspects of the Diagnostic Drawing Series of borderline personality disordered patients, and its context in contemporary art therapy. Unpublished master's thesis, Concordia University, Montreal.
- Mills, A., & Cohen, B. (1993). Facilitating the identification of multiple personality disorder through art: The Diagnostic Drawing Series. In E. S. Kluft (Ed.), *Expressive and functional therapies in the treatment of multiple personality disorder* (pp. 39-66). Springfield, IL: Charles C Thomas.
- Plokker, J. H. (1962). Artistic self-representation in mental disease: The shattered image of schizophrenia. The Hague: Mouton & Co.
- Rankin, A. (1994). Tree drawings and trauma indicators: A comparison of past research with current findings from the Diagnostic Drawing Series. Art Therapy: Journal of the American Art Therapy Association, 11(2), 119–121.
- Read, H. (1931). Education through art. New York: Pantheon Books.
- Torem, M. S., Gilbertson, A., & Light, V. (1990). Indications of physical, sexual, and verbal victimization in projective tree drawings. Journal of Clinical Psychology, 46, 900-906.

APPENDIX A Diagnostic Drawing Series Tree Scale

Creekmore, 1989

Pt. ID#:	Age:	Sex:	Dx:	
	Q			

Space Usage	0	33 (67 F
Horizontal/Vertical Page	Hp		Vp
Color	Cl	C3	C4
Idiosyncratic Color	Yes		No
Line-Shape	L	S	L/S
Line Quality/Pressure	Lt	М	Н
Landscape	Yes		No
Grass: Line Shape L/S	L	S	L/S
Vertical Zigzag Horizontal	V	Ζ	Н
Flowers	Yes		No
Animals	Yes		No
Tilt	Yes		No
Writing	Yes		No
Integrated Trees:			
Fruit Evergreen Palm	F	Ε	Р
Willow Deciduous	W	D	
Disintegrated Trees:			
Unrecognizable		Un	
Chaotic Branch		Ch	
Without Branches	3B		
Minimal Trunk	Min		1
Falling Apart	Fall		
Impoverished		Im	
Broken Branches		Bb	
Cut Down		Ct	
Dead		D	

Participation 7	ŧ	:
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Ground: Line Shape L/S Floating Paperbase	GL F1	GS Pb	GL/S
Leaves: Emphasis Falling None	E	Fa	N
Root Emphasis	Yes		No
Knothole	Yes		No
Swing	Yes		No
Unusual Placement	Yes		No
People	Yes		No
Blood	Yes		No
More than one tree	Yes		No

If there is also a tree in the FIRST picture, what is the difference between it and the tree in the SECOND picture? The tree in the SECOND picture is:

Size: Bigger Smaller	В	_	Sm	
Integration: More Same Less	Mo	Sa	Le	
Species: Same Different	Sa		Di	
Details: More Same Fewer	Мо	Sa	F	

Please specify any unusual/unclassifiable anomalies:

APPENDIX B Diagnostic Drawing Series Tree Rating Scale Definitions

Jeanne Creekmore, A.T.R. 1989[©]

Space Usage

Choices are: 0 for 0%-32% 33 for 33%-66% 67 for 67%-99% F for Full See page 6 of DDS Revised Rating Guide for definition.

Color

Choices are: C1 for one color used C3 for 2–3 colors used C4 for 4 or more colors used See page 1 of DDS Revised Rating Guide for definition. Rate colors used in the whole picture.

Idiosyncratic Color

Rate *Tree* only. Acceptable as normal (nonidiosyncratic) colors: black, brown, green (trunk), and autumnal colors (crown) are not considered idiosyncratic use of color. Bluish tones are not considered idiosyncratic in conifers, but idiosyncratic in deciduous trees.

Line/Shape

Choices are: L for Line only S for Shape only L/S for Line-Shape mix See page 2 of DDS Revised Rating Guide. Rate just the tree. Dots do not count as Line or Shape.

Line Quality/Pressure

Choices are: Lt for Light M for Medium H for Heavy See page 5 of DDS Revised Rating Guide.

Landscape

Rate *yes* with inclusion of grass and sky, or grass plus one or more environmental object.

Grass

Must be more than one line on either side of tree (Line only is rated as Ground Line); must include repetitive movement or shape. Also rate for ground that is not green. Subcategories: Choices are: L for Line only S for Shape only L/S for combination of Line and Shape Also rate direction of grass. Choices are: V for Vertical Z for Zigzag—grass is predominantly made up of a mix of vertical and

horizontal elements. H for Horizontal—grass primarily goes in this direction.

Flowers

This category includes flowers on ground or in tree.

Animals

Limited to animals, in, on, or under tree; also includes those on ground. Does not include birds flying in the sky. Rate *no* if there is a nest and no birds.

Tilt

Must occur at the trunk of tree and axis must slant 15 degrees or more.

Writing

Incudes titles, nonsense words, labels, name, and date.

Integrated Trees

Rate only if recognizable—Must be integrated. Choices are: Fruit Evergreen—includes many types of pine, Christmas trees. Palm Willow—branches must extend below midpoint of tree. Deciduous—sheds leaves annually

Disintegrated Tree Choices

If tree is not any of these choices below, then it must be considered integrated and rated according to the Integrated Tree category. Unrecognizable—(Un) The image, viewed in context of being the Tree picture, would not be recognized as a gestalt of a tree.



Chaotic Branch System—(Ch) Lack of organization among branches when articulated, or in Crowns drawn by scribbling. Do not confuse with "curlicue" crowns.

Without Branches—(sB) No branches are



drawn; trunk ends without branching out. Includes advanced (not impoverished) lollipop shapes, trees with "curlicue" crowns. Do not rate for palm trees or conifers.



Minimal Trunk—(Min) The trunk extending below the branch system is less than ¹/₄ the length of the tree.



Falling Apart—(Fall) Elements of the tree are primarily disconnected and disjointed. Rater should pay particular attention to the relationship of the trunk to the branches, as well as subsidiary branches to the main branches. Trunk has two sides, at least one of which is not solid or clearly delineated.

Impoverished—(Im) Line-only trees in monochrome or two colors; particularly when spiderlike, keyhole, or crude lollipop shapes.



Broken Branches—(Bb) Branches that are no longer fully connected to tree; includes branches on ground and cut off or damaged branches.



Cut Down Tree—(Ct) Cut down or broken near trunk.



Dead—(D) Tree appears to be obviously dead.

Ground

Ground Section: Ask yourself "What is the tree resting on?"

Ground Line—(GL) Must be Line Only and extend at least one inch on *both* sides of trunk. A continuous line that spans the base of the trunk must also extend at least one inch on either side of the trunk. Roots do not count as groundline. Grass may count as groundline (if it is line only). Does not include horizon lines in middle of the page. Rate as *Ground Line* if tree is resting on a continuous groundline with shape filled in underneath it.

Ground Shape—(GS) Shape that surrounds tree base; it must extend at least one inch on either side of trunk and be Shape Only.

Ground Line/Shape—(GL/S) Tree rests on combination of both line and shape which extends one inch on either side of trunk. If tree rests totally on line with shape underneath, rate as *Ground Line* (see definition above).

Floating—(Fl) Tree is floating in mid-air, at least three inches from paperbase.

Paperbase—(Pb) Bottom of tree trunk is drawn within one inch from bottom edge of paper. Rate *no* if the highest part of tree base is more than one inch from bottom of paper (even though roots may be within one inch of edge).

Leaves

Choices in this section are:

Leaf Emphasis—(E) Some individual leaves are prominent; they are drawn separately and can be identified as leaf shape and counted. Does NOT include lines for pine needles or fronds of palm trees.

Leaves-Falling—(Fa) Leaf/leaves must not be connected to tree; they are either in mid-air or on ground. If Falling is chosen, then Emphasis should be left blank.

Leaves-None—(N) No leaves on tree; no crown suggested. Includes winter trees and dead trees.

Root Emphasis

Specific roots are clearly delineated with double or single lines: must be more than two lines. Examples of acceptable choices:



Not acceptable:



Knothole

Circle enclosed in trunk. May be left empty or filled in; may contain a spiral, be viewed sideways, or suggested with a few lines. Examples:



Swing

Tire swings or swing connected to tree.

Unusual Placement

The image is drawn predominantly above the midline of the page (horizontal axis) OR most of the image is

drawn to the right or left of the vertical axis; particularly when the remainder of the page is blank. Trees off center but with other elements in the picture are rated *no*.

People

Includes stick figures or any recognizable human figure image. Figure must be drawn from the head area at least as far as the waist area or below.

Blood

Blood on tree or in any other section of the picture.

More Than One Tree

Rate *yes* if other trees are present in picture; bushes do not count as trees. (Bushes are less than half the size of trees and do not have any predominant trunk.)