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Draw, Write, Speak, Play: The Role of Projection in Diagnosis and Therapy of Children and Adolescents

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Abstract

In this chapter, I will (1) review the concept and function of projective mechanisms on a psychodynamic basis. In this section, I will outline the relation of projection to the unconscious, its use in innerpsychic dynamics, and the underlying mechanisms for its use in psychotherapy like creativity, imagination, and symbolization; (2) give an overview over the use of projective methods for testing and diagnosis in the psychological sciences; and (3) exemplify the use of projective methods in diagnostics and psychotherapy of children and adolescents. I will present current methods based on drawing, verbally describing and imagining, and playing arts, focusing on sand play therapy and miniature figure play.

Keywords: projective methodology, object relation theory, sandplay therapy, figure play, operationalized psychodynamic diagnostics in children and adolescents (OPD-CA-2), thematic apperception tests, narrative

1. Concept and function of projective mechanisms

1.1. The relation of projections to the unconscious

The Latin word “proiectus” means “to throw forth,” or “to cast forward,” and with regard to psychological sciences, several definitions have been provided. First of all, Sigmund Freud [1] described the “classical” projection as defense mechanism when the *ego* is threatened and refuses to acknowledge the trait, it attributes the trait to the outside world [2]. Later on, Freud broadened his view of projective mechanisms and refers the term projection to a general primitive mechanism, not only a defense mechanism, implying that projection may also be present when there is no conflict [3].

In this sense, the attributive projection can be understood as “ascribing one’s own motivations, feelings, and behavior to other persons” [2]. This definition seems to be the most common, but

also the most (over-)simplified one. There seem to be no relations to psychoanalytical concepts of the self, or the unconscious. Most authors use this term to describe “any kind of externalization” [2] with a correlation between characteristics of the proband and predictions or statements issued. The attributive projection is mostly similar what Horney called the “naïve” projection, which means that the subject assumes that others think, feel and behave in the same way as oneself [4]. Today, this view can be integrated into the concept of mentalization.

In a third view, Murstein introduced the autistic projection as “perceived aspects of another person which are modified to accomplish own needs [2].”

In the fourth mode of rationalized projection, the process of projection lies in the unconscious, but the projector is conscious of his/her behavior. In this context, the rationalized projection can be understood as “defence against guilt [2],” and is a special subtype of the classical projection.

In a critique of projective methods, Lilienfeld et al. describe the aim of projective testing as a method to “circumvent the conscious defenses of respondents” and to “gain privileged access to ... psychological information ... of which respondents are not consciously aware [5].” This caused a discussion about the mechanisms and function of projection and projective testing [6]. This seems to be a misconception of what projective mechanisms are capable of, since it is not an aim to circumvent defense mechanisms but to elucidate them and to work on them in a clinical setting. Freud lists the free association and the interpretation of dreams as two possible ways to access the unconscious, or at least, processes of the unconscious [7]. Later, parapraxis [8], hypnosis [9], and play [10] added additional access ways.

Thus, in the present chapter, the term projection is used to describe a transfer mechanism of intrapsychic elements called “representations of objects” either to other intrapsychic elements, or external elements (**Figure 1**). Of note, here only the mechanism is connoted, its presumable function is regarded as a secondary aspect.

1.2. The function of projections in innerpsychic dynamics

For diagnostic purposes and the planning of therapy, an elaborated system for operationalized psychodynamic diagnostics in children and adolescents (OPD-CA-2) has been established [11]. This system is a multiaxial diagnostic and classification system, including psychodynamic, developmental, and clinical aspects. The axes comprehend interpersonal relations, conflicts, structure, prerequisites for treatment, and the ICD-10 classification. The axes have been aligned to the DSM-5 system [12].

Currently, no studies have been published evaluating the usefulness of projective techniques with regard to the OPD-CA-2. On the other hand, the psychoanalytic theoretical background of projective techniques proposes a close relationship of the both [13–15].

What can be the functions of projections in intrapsychic dynamics? Besides the above-mentioned functions as defense mechanism, and developmental characteristic, projections may be used as a translator and connector of distinct and separate representation of objects. With regard to the object-relations theory [16–18], aspects the self and its conceptualization

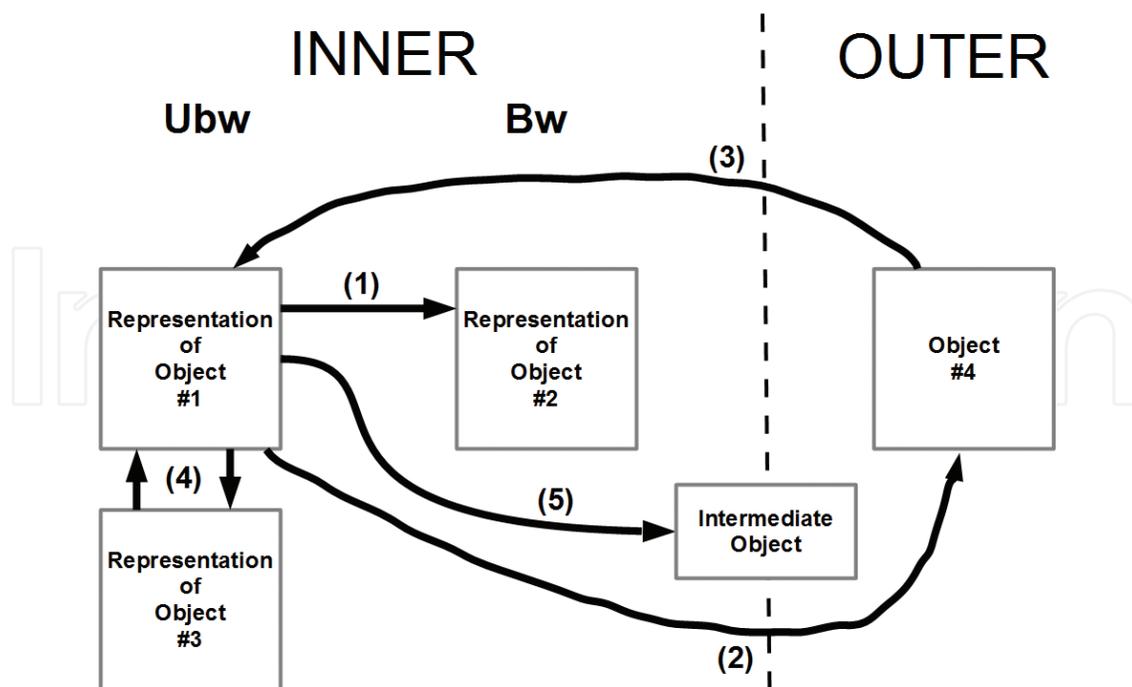


Figure 1. Depiction of projective pathways of objects or their representations, respectively. Inner unconscious objects can either project onto objects in the conscious which are also intrapsychic objects (1) or they can project onto objects in the outer world (2). In reverse, outer objects can project onto inner objects via internatization (3). Moreover, intrapsychic unconscious objects can project onto other intrapsychic onconscious objects (4). Finally, objects can project onto intermediate objects (5), a preferential way in children. (Ubw = the unconscious, Bw = the conscious).

contributed largely to an expanded understanding of projective mechanisms. A translating function of projections may be that characteristics of objects, for example, moral attributions such as “good”, “bad,” or “angry” can be transferred to another object, which seems to be less dangerous for the stability of the psychic system. Moreover, the connector function might be a possibility to link not closely related objects, or objects of diametrical attributes without generating internal psychological conflicts.

The main prerequisites for the application of projective techniques seem to be creativity, imagination, and the capability of symbolization [19, p. 27]. Of note, these prerequisites depend on the respective developmental level and are influenced by other steps in development, such as speech, conceptualization, abstractive ability, fine and gross motor skills, as well as the level of intelligence. Moreover, the influence of culture, descent and origin, religious belief, moral values, and educational history may strongly contribute to the usefulness of the application of projective techniques in children and adolescents. For example, in the author’s clinical experience with children and adolescents with an Islamic background originating from Syria, Iraq, and Afghanistan, these children do not easily use drawing or graphic techniques as means of expression. Thus, projective techniques such as human figure drawings may not be valid tools of assessment.

Another field of special care compromises the child’s cultural experiences with magic. For example, in cultures where witchcraft and magical forces are present in every-day life, for example in West-African or indigenous cultures of the Americas, deliberate use of the

respective test which is to be applied should be made, since these tests may be threatening to the child, or nonprojective mechanisms come into the foreground, diminishing the validity of the test result.

A third aspect is, for example, the connotation of specific animals, such as pigs, as impure. Then the application of the Patte Noire test [20] may be difficult for children with Islamic or Jewish background. Thus the child cannot identify with the hero of the story, and the validity of the test is severely restricted. On the other hand, the connotation of specific animals, for example, snakes or rats, in the occidental world is strongly different from the oriental connotations.

2. Projective methods for testing, diagnosis, and therapy

A wealth of projective methods has been developed for clinical and nonclinical use, for diagnostics, therapy and personality assessment, and for decision processes in human resource management. Several approaches to classify projective methods have been proposed, and in this chapter, I will follow the taxonomy of Lindzey [21], suggesting five groups of projective techniques based on the handling of the material. This classification is also reflected in the title of the present chapter.

First, *construction techniques* provide the material for creative processes such as drawing or writing, for example, pencil and paper for the various drawing tasks.

Second, *association techniques* involve the presentation of a stimulus, may it be verbal (like the wordlist in the C. G. Jung experiment of 1908 [22]) or nonverbal (such as an inkblot). The proband is then asked to provide verbal associations, or a narrative.

Third, *completion methods* provide stimulus material containing blanks, for example incomplete sentences such as in the Washington University Sentence Completion Test (SCT) [23], or incomplete stories [24–26]. Additionally, combined material such as comic-like pictures with an empty speech bubble has been used [27].

Fourth, *arrangement or selection methods* are based on picture material or building bricks and block, such as the Lowenfeld Mosaic Test [28].

Fifth, *expression techniques* involve playful arts material, such as miniature figures as in doll or figurine play [29, 30], or expressive sandplay [31–33].

There is no strict separation of these fields, and mostly combined methodologies seem to be in use in the clinical practice.

A similar classification has been proposed by Frank [34, 35], with constitutive, constructive, interpretive, carthartic, and refractive techniques. A discussion of both classifications is provided by Semeonoff [36]. Of note, there is a certain overlap between the different categories as well as the different categorization systems. In general, a three-dimensional model of classification systems has been proposed, containing the various aspects of stimulus, response, and intention (**Figure 2**).

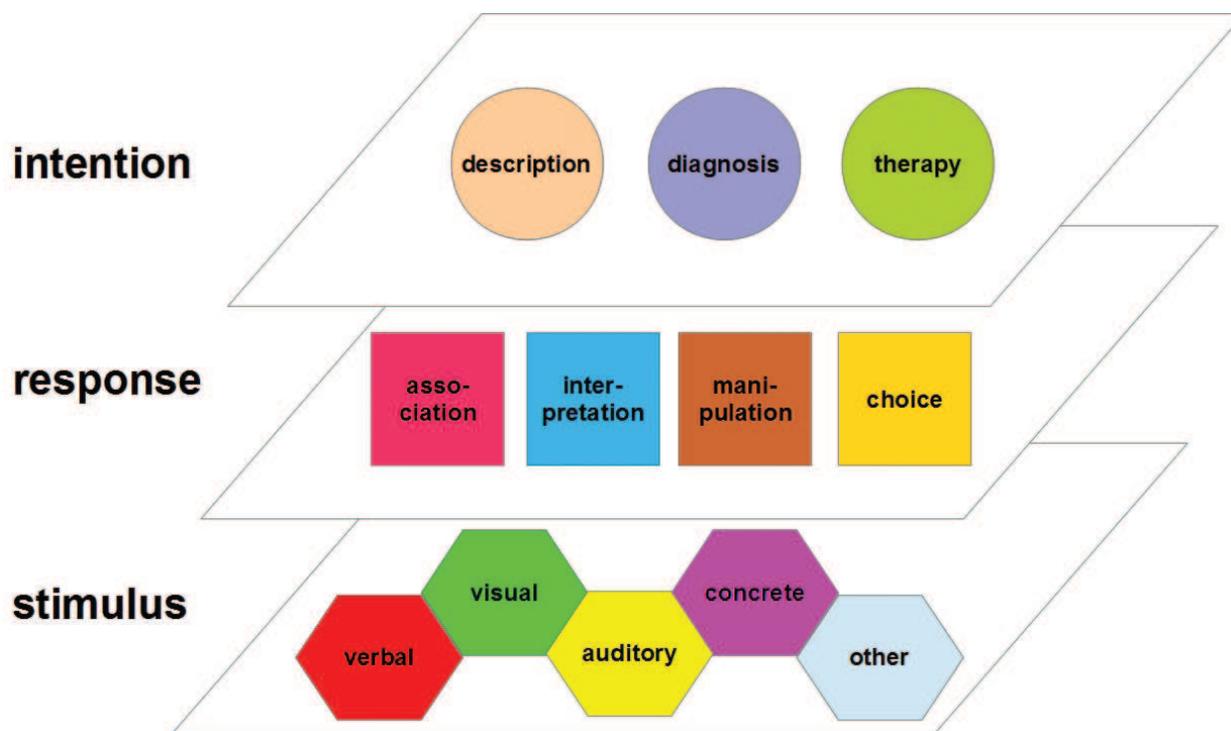


Figure 2. Multidimensional classification system of projective methods. Projective techniques can be classified according to the sensual quality of the stimulus (verbal, visual, auditory, etc.), the category of response (e.g., association, interpretation, manipulation as in play or construction, or choice and ordering), and the intention or purpose, may it be diagnostic, may it be therapeutic, or may it be for the description of personality traits.

With regard to the nomenclature, the term “apperceptive” means that the proband is asked for a projective response to visual stimuli, for example in the TAT [37] and the variants derived from this test. The term “thematic” means in this context that a narrative, or a story is created, not only short response, or value on a rating scale.

The term “semiprojective” means that a test provides operant, or projective, stimuli and records the answers in a respondent way, such as with a questionnaire [38]. Another definition of “semiprojective” describes the creation of a real-world scene by symbolic, or transformed, means, such as figurines, drawings etc. [39].

There has been a debate on the psychometric properties of diagnostic tests, criteria including norms, reliability, objectivity, validity and incremental validity, and its utility for treatment purposes [5, 6], but in the current chapter, I will not add to this debate. In the literature review for this chapter, there has been numerous doubtful and dubious “tests,” which seem to be based on individual ideology, not scientific scholarship. Moreover, the terms “test,” “technique,” and “method” are often used interchangeably, but in the light of the current literature, a “test” is related to a clinical diagnostic purpose, and it can be judged and challenged by the above-mentioned psychometric criteria. For a “technique” or “method” lesser demands are necessary with regard to the latter, and it seems that “techniques” / “methods” mainly serve the therapeutic objectives. In this case, their clinical use can be assessed by means of the methods of evidence-based medicine, which for example include the evaluation of clinical studies with regard to randomization, blinding, and the description of withdrawals or drop-outs [40, 41].

Standardized psychological diagnostics relying on clinical interviews, questionnaires, rating scales, etc., which are based on normalization of samples, will result in the relative position of an individual within a given distribution. For example, the standard normal distribution is characterized by its mean value and the standard deviation. Thus, all values obtained smaller or larger than two standard deviations are out of the normal range. An individual taking the test can hence be grouped in categories like “meeting the criteria” or “not meeting the criteria” or will result in the position of the individual in a percentile rank (PR).

On the other hand, projective techniques aim at describing an individual not relatively to others, but individually. With regard to developing a personalized medicine, this will become more and more important. Psychometric data like standardization, objectivity, validity, and reliability can be obtained using adequate measures, for example, the OPD-CA. Normalization of data may not be sensible, since most of the projective methods do not aim at placing an individual in a relative order compared to others (such as percentile ranks).

Projective techniques have also been used in anthropology for cross-cultural studies [15], with the background that verbal aspects could be eliminated. In summary, the use of projective techniques strongly depended on cultural conceptualization, and surprising results for example with regard to drawing methods have been observed. For example, in the past, human figure drawings like the Machover Draw-a-Person test [42] have been applied for the intelligence and developmental measures. Administered in field studies in Inuit and Cree children, it revealed that the Western conceptualization of intelligence cannot be measured using this task [15, p. 294]. In conclusion, a projective test should test projective mechanisms, and not be used for other variables, such as intelligence measures, motor skills, speech development, or questions of child custody, since the validity of this approach is not guaranteed.

3. Clinically used projective tests, methods, and techniques: an overview

In the following section, I will give an overview over the most commonly used projective tests, methods, and techniques applied to children and adolescents. The following descriptions are neither complete nor representative, but they may give a fast first glance on the available techniques.

Table 1 gives an overview of available projective tests, methods, and techniques. (Data and tests compiled from [15, 19, 36, 43–48].)

3.1. Drawing

3.1.1. Human figure drawings: Machover Draw-A-Person Test (DAP); Goodenough-Harris Drawing Test; Goodenough Draw-a-Man (DAM) Test

Description: In the original version of Goodenough [49] and also later by Ziler [50], the child is instructed to draw a man (today: person), “as good as you can.” Later, the instruction was extended to “draw a man, a woman, and yourself.” Additional modifications involve the drawing of “a man, a woman, and yourself [42].”

1. Association

1.1. Verbal

Word Association Technique (Jung 1910)

Brook Reaction Test (Brook & Heim 1960)

Adjective Generation Technique (AGT) (Allen & Potkay 1973)

Kent-Rosanoff Free Association Test (Kent & Rosanoff 1910)

Composite Free Association (Wells 1928)

Polygraph Test (Larson 1921)

1.2. Visual

Rorschach Inkblot Technique [Psychodiagnostics Plates] (Rorschach 1921)

(Derivatives:)

Behn-Rorschach Test (Bero) (Zulliger 1941)

Fuchs-Rorschach-Test (Fu-Ro-Test) (Drey-Fuchs 1958)

Zullinger Test (originally Z Test) (Zulliger 1951)

Harrower Blots (Harrower-Erickson 1945)

Kataguchi-Rorschach Test (Ka-Ro) (Kataguchi & Shobo 1970)

Structured-Objective Rorschach Test (SORT) (Stone 1958)

Baughman's New Method of Rorschach Inquiry (Baughman 1958)

Barron's Movement Blots (Barron 1955)

(Non-Rorschach inkblot techniques:)

Holtzman Inkblot Technique (HIT) (Holtzman 1958)

Howard Ink Blot Test (Howard 1953)

Helsingfors Test (Bruhns c1963)

Somatic Inkblot Series (SIS) (Cassell 1980)

Cloud Picture Method (Stern 1937)

Hand Test (HT) (Wagner 1962; revision 1983)

Paired Hands Test (PHT) (Zucker 1968)

[Apperceptive Situations Test] (A-S-T) [German version only] (Laufs 1990)

Columbus Test (Langeveld 1969)

1.3. Auditory

Verbal Summator (=Recorded Auditory Apperception Test) (Skinner 1936)

Tautophone Technique (Rosenzweig 1942)

Auditory Projective Technique (=Azzageddi Test) (Davids & Murray 1955)

Auditory Apperception Test (AAT) (Stone 1953)

2. Construction

2.1. Pictorial stimulus

Thematic Apperception Test (TAT) (Murray 1935)

Children's Apperception Test (C.A.T.) (Bellak & Bellak 1949)
Thompson Modification of the Thematic Apperception Test (T-TAT) (Thompson 1949)
Picture Impressions Test (Libo 1957)
South African Picture Analysis Test (SAPAT) (Nel & Pelsler 1960)
Bender Visual Motor Gestalt Test (Bender 1938)
Blacky Pictures (Blum 1947)
Patte Noire (PN) Test (Corman 1961)
Object Relations Technique (ORT) (Phillipson 1955)
Children's Object Relations Technique (CORT) (Wilkinson 1975)
Pickford Projective Pictures (Pickford 1963)
Jackson's Test of Family Attitudes (TFA) (Jackson 1952)
Family Relations Indicator (FRI) (Howells & Lickorish 1962)
Family Story Technique (FST) (Kadushina, Cutlera, Waxenberg & Sagera 1969)
Interpersonal Perception Method (IPM) (Laing, Phillipson & Lee 1966)
Children's Apperceptive Story-Telling Test (CAST) (Schneider 1989)
Children's Hospital Apperception Test (no reference found)
Tell-Me-A-Story (TEMAS) (Costantino Malgady & Rogler 1988)
Make-A-Picture Story Test (MAPS) (Shneidman 1948)
Themes Concerning Blacks (TCB) (Williams 1972)
Visual Apperception Test (VAT) (Khan 1960)
Roberts Apperception Test for Children Test (RATC) (Roberts 1982; revised 2001)
School Apperception Method (S.A.M.) (Solomon & Starr 1968)
School Apperception Story Procedure (SASP) (Jones 2001)
Senior Apperception Technique (S.A.T.) (Bellak & Abrams 1998)
Educational Apperception Test (EAT) (Thompson & Sones 1975)
Pediatric Pain Inventory (Lollar, Smits & Patterson 1982)
Indian Modification of the Thematic Apperception Test (Chowdhury 1967)
Social-Situation Pictures (Schwarz 1932)
Family Apperception Test (FAT) (Sotile, Julian, Henry & Sotile 1988)
Adolescent Apperception Cards (AAC) (Silverton 1993)
Waechter Picture Test (Waechter 1982)
Fairy Tale Test (FTT) (Coulacoglou 1995)
Homosexual Apperception Test (HAT) (Rosenzweig 1940)
Symonds Picture-Story Test (PST) (Symonds 1948)
Tasks of Emotional Development Test (TED Test) (Cohen & Weil 1971)
Michigan Picture Test (MPT) (Andrew, Hartwell, Hutt & Walton 1953; revised 1980)
Adolescent Separation Anxiety Test (Hansburg 1972; modified by Klagsbrun & Bowlby 1976; modified by Main, Kaplan & Cassidy 1985)

Test Filmique Thématique (Cohen-Séat & Rébeillard 1955)

Adoption Story Cards (Gardner 1978)

Projective Story Telling Cards (Caruso 1993)

[Geschichten-Erzähl-Test projektiv (GETp)] (German adaptation of the Projective Story Telling Cards) (Preuß & Landsberg 1996)

Four Picture Test (FPT) (van Lennep 1930)

Symbol Elaboration Test (S.E.T.) (Krout 1950)

Thurston-Cradock Test of Shame (TCTS) (Thurston & Cradock 2009)

Children's Self-Report and Projective Inventory (CSRPI) (Ziffer & Shapiro 1992)

IES (Id, Ego, Super-Ego) Test (Dombrose & Slobin 1958)

Group Personality Projective Test (GPPT) (Cassell & Kahn 1958)

Adult Attachment Projective (AAP) (George, West & Patten 1997)

2.2. Verbal stimulus

The Insight Test (Sargent 1953)

Schulangst-Test (SAT) (Husslein 1978)

[Fairy Tale Dialogs with Children] (Available in German as: Märchendialoge mit Kindern) (Simon-Wundt 2004)

[Wish Test] (Wilde 1950)

[Ten Wishes Phantasy Game] (available in German as: 10-Wünsche-Phantastie-Spiel) (Klosinski 1988)

2.3. Computer-based

Self-Administered Global Apperception Scales (SAGAS) (Volcani 2000)

Parent Administered Child Test (PACT) (Volcani 2000)

Multi-person Administered Child Test (M-PACT) (Volcani 2000)

3. Completion

3.1. Verbal or Narrative

Sentence Completion Test (Sachs & Levy 1950)

Washington University Sentence Completion Test (WUSCT) (Loevinger 1948)

Rotter Incomplete Sentences Blank (RISB) (Rotter & Rafferty 1950)

Düss Fable Method (Despert Fables) (Düss 1940; English version Despert 1946; revised and enlarged by Fine 1948)

Madeleine Thomas Completion Stories Test (Thomas 1937; English version Mills 1953)

Munsterburg Incomplete Stories (Munsterberg-Koppitz 1955)

MacArthur Story Stem Battery (MSSB) (Bretherton, Oppenheim, Buchsbaum, Emde & the MacArthur Narrative Work Group 1990)

Rosenzweig Picture Frustration Test (P-F Study) (Rosenzweig 1948)

Punishment Situation Index (PSI) (Morgan & Geier 1957)

Rock-a-bye-Baby (Haworth 1957) [Film]

3.2. Graphic or Drawing

Incomplete Man Test (Gesell 1925)

Drawing Completion Test (Kinget 1952)

Healy Pictorial Completion Test (Healy 1918)

4. Choice or Ordering

4.1. Pictures

Szondi Test (Szondi 1935)

Radke Projective Pictures (Radke 1946)

Iowa Picture Interpretation Test (IPIT) (Hurley 1955)

Tomkins-Horn Picture Arrangement Test (Tomkins 1952)

Welsh Figure Preference Test (WFPT) (=Barron-Welsh Art Scales (BWAS)) (Welsh 1949)

MARI Card Test (Kellogg 1980)

Arrington Visual Preference Test (AVPT) (Arrington 1986)

Full-Range Picture Vocabulary Test (Ammons 1948)

4.2. Human Figures

Family Relations Test (FRT) (Bene-Anthony 1957)

4.3. Symbols

Lüscher Color Test (Lüscher 1947)

Color Pyramid Test (CPT) (Pfister 1950)

Kahn Test of Symbol Arrangement (KTSA) (Kahn 1949)

Design Judgment Test (Graves 1948)

Meier Art Tests I, Art Judgment (Meier 1942)

Meier Art Tests II, Aesthetic Perception (Meier 1963)

5. Expression

5.1. Drawing

5.1.1. Individual tasks

Draw-a-Man Test (D-A-M) (Goodenough-Harris Drawing Test) (Goodenough 1926)

Draw-A-Person Test (D-A-P) (Machover 1949)

[Man Drawing Test] (German version available as: Mann-Zeichen-Test) (MZT) (Ziler 1949)

House-Tree-Person Projective Drawing Technique (H-T-P) (Buck 1948)

Chromatic House-Tree-Person Drawing Test (Payne 1948)

Kinetic House-Tree-Person Test (Burns 1967)

Kinetic Family Drawing (K-F-D) (Burns & Kaufman 1970)

Kinetic School Drawing (KSD) (Prout and Phillips 1974)

Kinetic Kindergarten Drawing (KKD)

Kinetic Nursery Drawing (KND)

Kinetic Hospital Drawing (KHD) (Dóra 2010)

Kinetic Business Drawing (KBD) (Burns 1987)

Kinetic Political Drawing (KPD) (Burns 1987)

Kinetic Religious Drawing (KRD) (Burn 1987)

Kinetic House-Tree-Person Drawings (K-H-T-P) (Burns 1986)
Family Centered Circle Drawings (F-C-C-D) (Burns 1991)
Kinetic Shop Window Drawing (Burns 1991)
Parent's Self-Centered Circle Drawing (Burns 1990)
Mother-and-Child Drawing (Dewdney & Dewdney 1970)
Family Circles Method (Geddes & Medqay 1977)
Five Step Intervention Method (Vass 2011)
Prospective Kinetic Family Drawing (Kymissis 1992)
Draw-a-Classroom (DAC) (Kutnick 1978)
Draw-a-Group Test (Hare & Hare 1956)
Teacher, Doctor, Policeman (Klepsch 1980)
Human Figure Drawings (HFD) (Klepsch & Logie 1982)
Draw-a-Dog Scale (Levinson & Mezei 1973)
Draw-a-Family (DAF) Test (Hulse 1951)
Corman's Family Drawing (Corman 1964)
Sun Family Drawing (Iten 1980)
Draw-a-Member of a Minority Test (Hammer 1958)
Draw-a-Person in the Rain Test (DAPR) (Abrams in: Hammer 1958)
Most Unpleasant Concept Test (Harrower 1950)
Family Drawing (Appel 1931; Hulse 1952)
Draw-a-Story (DAS) (Silver 1983)
Silver Drawing Test (SDT) (Silver 1983)
Childhood Hand That Disturbs Test (CHaD) (Davido 1994)
Dot-to-Dot (Hays 1979)
Eight card redrawing test (8CRT) (Caligor 1957)
Two Houses Technique (2HT) (Szyrynski 1949)
Star Wave Test (SWT) (Avé-Lallament 1979; English 1984)
Enchanted Family Drawing Test (Kos & Biermann 1973)
Animal Family Drawing (AFD) (Brem-Gräser 1957)
Animal Kinetic Family Drawing (AKFD) (Niesenbaum Jones 1985)
Bird's Nest Drawing (BND) (Kaiser 1996)
Regressed Kinetic Family Drawing (RKFD) (Fürth 1988)
Tree Test (Koch 1952)
Bolander's Tree Drawing Test (Bolander 1977)
Stora's Tree Drawing Test (Stora 1963)
Four Trees Test (undocumented: in Vass 2011)
Three Trees Test (Corboz, Gyax& Helfenstein 1962; Waser 1986)

Tree Family Drawing (Feuer 2005)
Projective Tree Drawing before, during and after a Storm (Miller 1997)
Wartegg Drawing Test (WZT) (Wartegg 1939)
Eight Frame Colored Squiggle Technique (McKim & Steinhardt 1983)
Social Atom (Moreno 1921)
Sociogram (Moreno 1921)
Draw-a-Group Test (Hares 1956)
Dynamic Examination of Drawings (Hárdy 1956)
Rosenberg's Draw-a-Person Technique (Levy 1950)
Projective Road Drawing (Hanes 1995)
Multi-Dimensional Drawing Task (MDDT) (Bloch 1968)
Personal Sphere Model (Schmiedek 1973)
Finger Painting (Kadis 1950)

5.1.2. Squiggles

Squiggle Technique / Game (Winnicott 1971)
Scribble Test (Winnicott 1971; Cane 1983)
Meurisse Scribble Test (Meurisse 1948)
Grätz Scribble Test (Grätz 1978)
Vass Scribble Test (Vass 2008)
Kutasch and Gehl Scribble Test (Graphomotor Projection Technique) (

5.1.3. Group drawings

Collaborative Drawing Technique (CDT) (Smith 1985)
Joint Family Holiday Drawing Technique (Jordan 2001)
Drawing Together Method (DTM) (Nagy 2007)

5.2. Blocks and bricks

Lowenfeld Mosaic Test (LMT) (Lowenfeld 1951)
Manikin Construction Task (Cox & Parkin 1986)

5.3. Theater/Play/Psychodrama

Psychodrama (Moreno 1930s)

5.4. Figurine Positioning

World Technique (Lowenfeld 1929)
World Test (=Toy World Test) (Bühler 1936)
Picture World Test (PWT) (Bühler & Manson 1956)
Bolgar-Fischer Little World Test (Bolgar & Fischer 1940)
Village Test (Arthus 1949)
Imaginary Village (Mucchielli 1960)
Dramatic Productions Test (DPT) (Homberger [=Erikson] 1938)
Erica Method (Harding & Danielson c1934)

Sandplay Therapy (Kalff 1950s, published 1966)

Expressive Sandwork (Pattis Zoja, Lan, Shen & Thom 2002)

Sceno Test (von Staabs 1938, published 1964)

5.5. *Playing arts*

Floor Games (Wells 1911)

Little Wars (Wells 1913)

[Children's World Test] (German version only available as: Kinder-Welt-Test) (KWT) (Baulig & Baulig 2006)

Miniature figure play with the PlaymoCase (Plämokasten) (Ärztliche Akademie für Psychotherapie von Kindern und Jugendlichen, Munich, 2013; revision 2015)

Structured Doll Play Test (SDT) (Lynn 1957)

Table 1. Overview of projective methods.

Aim: The test aims at detecting the level of intellectual abilities, and was intended as test for school entry qualification. It gives information about the developmental status and the self-esteem of a child. The DAP depends on visual perception, the spatial organization of apperception and the coordination of visual and motor skills.

Age: not limited, best from 3 to 14, but it is advisable not to use the test on children 11+.

Time: not specified, but 10–15 min seem to be sufficient

Scores/norms: 1651 drawings from children [50], in the revised edition, 1125 children aged 3–14 [51].

Only a poor correlation has been found to intelligence tests [52, 53], thus the DAP should *not* be used instead of an intelligence test.

Publication date: 1926 (revised 1963).

References: [42, 49, 51, 54].

3.1.2. *House-Tree-Person projective drawing technique (H-T-P)*

Description: The child is instructed to draw “a house, a tree, and a person” without further specification which house, which tree, or which person is meant. Then the child is invited to explain the drawings.

Aim: The test aims at measuring personality traits, brain damage and general mental functioning, and developmental psychopathology.

Age: 3+.

Time: Not specified, but 10–15 min should be sufficient.

Scores/norms: N/A.

Publication date: 1970.

References: [55].

3.1.3. *Kinetic Family Drawing (K-F-D)*

Description: The child is asked to draw a picture of its family, including themselves, “doing something,” which is meant to give the kinetic aspect.

Aim: The test intends to describe the child’s attitudes toward the family members and the family dynamics.

Ages: Not specified.

Time: Not specified, but mostly, 15 min seem sufficient.

Scores/norms: N/A.

Publication date: 1987.

References: [56].

3.1.4. *Star Wave Test (SWT)*

Description: The child is instructed to “draw a starry sky above sea waves.”

Aim: The test aims at detecting developmental retardation and psychopathology. It can be applied in children with various cultural backgrounds.

Age: 3+.

Time: Not specified, but 10–15 min seem to be sufficient.

Scores/norms: N/A.

Publication date: 1994.

References: [57].

3.1.5. *Enchanted family drawing test*

Description: The child is asked “to put the members of a family under the spell of a magician, without any limits being set on the child’s imagination in the choice of objects to be drawn [58].” Then the child is invited to tell a story about the spell and its casting.

Aim: The test aims at describing the family system and revealing psychic conflicts of the child.

Age: 3+.

Time: Not specified, but 15–20 min should be sufficient.

Scores/norms: Statistical data are available on 4000 drawings from children and adolescents, of which 1562 had behavioral, neurotic, or psychosomatic issues [58].

Publication date: 1973.

References: [58, 59].

Note: Care should be taken with regard to the cultural background of the child with regard to magical experiences (see Section 1).

3.1.6. *Tree test*

Description: The child is instructed to “draw a tree” without further specifications.

Aim: The test aims at detecting personality traits. It is linked to intelligence and developmental status.

Age: 6+.

Time: 5–10 min.

Scores/norms: Formal aspects of the tree like root, trunk, branches, and treetop. Additional features like fruit, leaves, or fauna (bird, squirrels) are noted.

There are quantitative and qualitative valid data available, based on 1800 tree drawings [60].

Publication date: 1952.

References: [61, 62].

3.1.7. *Wartegg drawing test (WZT)*

Description: The proband is given a standardized sheet containing eight square fields with a stimulus in each of the squares (lines, dots). The proband is instructed to complete the stimuli to drawings. The proband is asked to describe each drawing and give a title to each square.

Aim: The test aims at discovering “innerpsychic layers,” which are thought to constitute a person’s character and to describe the proband’s personality structure.

Age: Not specified.

Time: 20–30 min.

Scores/norms: Sequence of drawings and time used, “profile of [innerpsychic] layers,” “profile of qualities,” “quantitative dominant feature,” “qualitative relation of poles,” “structure of the picture,” “characterologic projection.”

Publication date: 1939.

References: [63–65].

Note: The test is not based on a common theoretical basis and does show several critical issues [66, 67].

3.1.8. *Winnicott’s squiggle technique*

Description: The therapist begins with drawing a squiggle (any abstract figure, line, scheme, or pictorial element) on a sheet of paper. Then the child is asked to “make a picture out of it.” The picture should be a drawing and should not contain numbers or letters, but there is no strict

interdiction. Then roles are reversed and the child starts with a squiggle, which the therapist completes. Both can give verbal comments about the drawing.

It is useful to use two different colors for the child and the therapist, respectively, to discriminate between the contributions.

Aim: The test aims at enhancing in-depth communication between the child and therapist and access unconscious parts of the proband.

Age: 7+ (or earlier).

Time: not limited.

Scores/norms: None.

Publication date: 1971.

References: [68, 69].

3.2. Verbal description and imagination

3.2.1. *Thematic Apperception Test (TAT)*

Description: The proband is presented 8–12 black-and-white picture cards out of a set of 32 cards, 31 of these showing various persons in ambiguous situations, one card is completely blank. The cards are numbered and some contain letters for presenting these cards only to specific subgroups: B for boys, G for girls, M for male (14+), and F for female (14+). The proband is asked to create “dramatic” story for the pictures shown with regard to the story shown, the depicted persons’ feelings and thoughts, and the possible solution of the story.

Aim: This test aims at describing personality traits and neurotic personalities.

Age: 4+.

Time: Not specified.

Scores/norms: There are several scoring systems available for the TAT, including the analysis of defense mechanisms [70, 71].

Scoring systems have been proposed like SCORs [72] and SCORS-Q [73].

Murray [37] suggested the following six aspects: Who is the main person of the story? What are the motives, aspirations, and emotions of the main person (“needs” in the original)? What is the influence of the social environment on the main person (“presses” in the original)? What is the solution, or the ending, of the story? What is the theme with regard of the “needs,” “presses,” and the ending of the story? Which interests and emotions are expressed by the narrator?

Publication date: 1943.

References: [37].

3.2.2. *Children's Apperception Test (CAT)*

Description: Based on the Thematic Apperception Test (TAT), the CAT adapts the pictures presented. The child is presented 10 pictures of social scenes, where the figures are represented as animals. The child is asked to create a narrative out of each picture.

Aim: The test aims at assessing personality, the level of maturity, and mental health.

Age: 3–10.

Time: 20–45 min.

Scores/norms: Several scoring systems have been proposed [see overview in 74].

Publication date: 1949.

References: [75].

3.2.3. *Tell-Me-A-Story Test (TEMAS)*

Description: The TEMAS (the Spanish word for themes) is a multicultural narrative test based on 23 colored picture test cards presenting social situations. Eleven of the cards are gender specific. The minority cards show predominantly Hispanic and Black individuals, while the nonminority cards depict mostly nonminority people. The child is presented the set of cards and asked to create a narrative of the situation depicted.

Aim: The test aims at screening both minority and nonminority children for emotional and behavior problems.

Age: 5–18.

Time: Not specified.

Scores/norms: The test scores 9 personality aspects: interpersonal relations, aggression, anxiety and depression, achievement and motivation, delay of gratification, self-concept, sexual identity, moral judgment, reality testing, and functions not pulled; 7 affects: Happy, sad, angry, fearful, neutral, ambivalent, inappropriate affect; and 18 cognitive functions including reaction time, total time, inquiries, fluency, omissions, sequencing, imagination, relationships, transformations, and conflicts.

Normative tables for white, black, Puerto Rican, and other Hispanic children and adolescents are available. Data are based on 600 children (aged 5–13 years).

Publication date: 1982.

References: [76, 77].

3.2.4. *Fairy Tale Test (FTT)*

Description: The test material contains 21 cards in 7 sets of 3 cards each. The child is presented the 3 cards of the set and asked questions specified in the manual.

The 7 sets of cards show Little Red Riding Hood (2 sets), Snow White and the Seven Dwarfs, and characters of witches, dwarfs, wolves, and giants.

Aim: The FTT can be used to assess the child's personality dynamics, including personality traits, and their interrelations. "The FTT can be effectively employed for: (1) personality assessment for research purposes (developmental, cross cultural and longitudinal studies), (2) diagnostic evaluation of clinical studies (severe psychopathology or disturbance as an outcome of ephemeral traumatic or stressful events, and (3) evaluation of psychotherapeutic treatment [78]."

Age: 6–12.

Time: about 45 min.

Scores/norms: Quantitative interpretation of 30 variables in six categories: impulses (9 items), desires (3), needs (5), ego functions (8), emotional states (3), and object relations (2). These comprehend: adaptation of content, unusual measures, relation to the mother, relation to the father, fear of aggressions, fears, desire for superiority, dominant aggression, oral needs, oral aggression, sense of property, desire of material wealth, desire for affection, aggression type A (exploiting, nonemotional, nonaroused), defensive aggression, envious aggression, retaliative aggression, sense of belonging, altruism, ambivalence, depression, self-esteem, moral, need for protection, sexuality, and repetitions.

Qualitative interpretation evaluates defense mechanisms, family dynamics, anxiety, and Ego functioning with synthetic-integrative functioning, regulation and control of impulses, mastery, and judgment and the quality of thought process.

Standardization is available for the FTT from data of 760 children aged 7–12 in a first study, and 873 children aged 6–7 in a second study.

Publication date: 1995.

References: [79].

3.2.5. Rorschach inkblot technique

Description: The proband is presented 10 inkblot tables in a standardized order. At the first sight, all tables seem to be symmetrical. Some of the tables are colored, some are depicted in grayscale. The proband is asked to describe what is seen on the plates. There is no limit in the answers with regard to number, or time.

Aim: Originally, Rorschach envisioned the use of plates as a diagnostic tool for schizophrenia. Later, the Rorschach inkblot technique aimed at describing and classifying personality traits of the proband.

Age: 5+.

Time: Not specified.

Scores/norms: There are several scoring systems available, which are all based on the same categories, including location (whole responses, detail responses with tiny details, edge details,

interior details, and rare details, and space responses), determinants (responses relying to form, movement, color, shading, achromatic color, texture, chiaroscuro [=distribution of light and shade], "X-ray," variations of shading, reflection, pair) and content (human, animal, anatomy, human, and animal objects, "objects," "pathognomonic," and disturbing, popular and original) [36, p. 24–51, 80, 81]. One of the most elaborated scoring systems is the "Exner system" aka "Comprehensive System [82–84]."

Publication date: 1921.

References: [13, 85].

3.2.6. *Holtzman inkblot test/technique (HIT)*

Description: The proband is presented 45 plates containing inkblots after 2 trial blots, and asked to produce a single response per blot. There are two independent forms (A, B) available.

Aim: The HIT aims at describing and classifying the personality of the proband.

Age: 5+.

Time: Not specified.

Scores/norms: The scoring system is based on 22 variables in 6 clusters (or "dimensions), including "movement, integration, human, barrier, popular, color, shading, form definiteness (reversed), pathognomonic verbalization, anxiety, hostility, movement, form appropriateness, location, reaction time, rejection, animal (reversed), penetration, anatomy, and sex [86]." Norms are available from 1400 individuals without psychopathology, schizophrenia, depression, and mental retardation.

Publication date: 1961.

References: [87].

3.2.7. *Rotter incomplete sentences blank (RISB)*

Description: The proband is presented a list of 40 incomplete short sentences, consisting of 1–2 word sentences. The proband is asked to complete the respective sentence.

Aim: The RISB is described as a screening instrument for adolescents and adults and aims at measuring adjustment.

Age: There are three different forms available, one for school children, one for college students, and one for adults.

Time: 20–40 min.

Scores/norms: A scoring system has been developed on a scale from 0 to 6 for each answer according to empirically derived answers for males and females. Norms have been provided for college students [88].

Publication date: 1950 (revised 1992).

References: [89, 90].

3.2.8. *Hand test*

Description: The proband is shown 10 picture cards showing line drawings of a hand in various positions. The cards are administered one after another and the proband is asked to explain what each hand is doing.

Aim: measure action tendencies, especially acting-out and aggressive behavior in children and adults.

Age: 5+.

Time: 10 min.

Scores/norms: Means, cut-off scores, and typical score ranges for normal and various diagnostic groups are provided. Quantitative scores comprise aggression, exhibition, communication, dependence, acquisition, tension, and withdrawal, whereas qualitative scores aim at discovering underlying feelings and motivations. Six summary scores, including an index of overall pathology and an acting-out ratio, are provided. The latter is used to predict aggressive behavior.

Publication date: 1962.

References: [91, 92].

3.2.9. *Family Relations Test (FRT)*

Description: The test material consists of 20 stereotypic figure shapes made out of paper/cardboard. These figures represent persons of different age and function, e.g. child, parent(s), grandparent(s), and most importantly, the “Nobody” figure. There is a small container attached to the figures, in which the child can place tokens, or the small question cards.

The child is first asked to pick the relevant figures of his/her family, and is then asked questions about family members, for example, questions like “This person in the family is very nice to me.” Then the child is asked to place the card with the question into the box attached to the figure shape.

Aim: The FRT has been used in questions of child welfare, child protection, and family placement.

Age: 3–7, 7–15 (2 versions).

Time: 30 min.

Scores/norms: For scoring, the number(s) of each card is noted with regard to the respective figure chosen. The interpretation is based on “incoming” (*from* the person) and “outgoing” (*towards* the person) attitudes, or feelings.

Normalization is available for British [93] and German children, aged 4.0–5.11 [94] and 6.0–11.11 [95].

Publication date: 1957.

References: [96, 97].

3.2.10. *Patte Noire (PN) test [Schweinchen-Schwarzfuß-Test (SFT)]*

Description: The test material consists of 16 pictures of a piglet, named “Patte Noire” (French for black foot), which serves as identification figure. Members of the pig family (mother, father, and siblings), other animals, and humans are shown.

The child is shown all picture cards, asked to pick some, or all, pictures, and to create a story out of these pictures. Preferred and rejected pictures are noted.

Special care should be taken with regard to cultural and religious attributions to pigs. For example, using this test with Moslem or Jewish children may not give valid results.

Aim: The test aims at detecting drive tendencies and defense mechanisms in a psychoanalytical interpretation.

Age: 7–13.

Time: 60–90 min.

Scores/norms: Psychoanalytic themes can be identified due to developmental stages, typical conflicts such as sibling rivalry.

Publication date: 1969.

References: [20, 98].

Note: Deliberate care should be taken applying this test to children with Islamic or Jewish background, where pigs are regarded as impure.

3.2.11. *Madeleine Thomas completion stories test*

Description: The proband is presented with 15 story stems, and is asked to complete the story.

Aim: The test aims at describing the child’s attitude towards the presented fields, for example such as family and living conditions, school and learning situation, interaction with peers, and the fantasy life of an identification figure (presented as a boy or girl of the same age and sex as the proband).

Age: 3+.

Time: Not specified.

Scores/norms: Not available.

Publication date: 1937.

References: [24, 99].

3.2.12. *Düss fable method (Despert fables)*

Description: The proband is presented 10 story stems, some with animal characters (thus the test is called fable method). The proband is asked to complete the story.

Later the stories have been expanded to 20.

Aim: The method aims at presenting a psychoanalytic access to the child's main themes. The interpretation may give information about structure, conflicts, and relations.

In the later version, a categorization of themes including "dependency, hostility, identification, sibling rivalry, Oedipal issues, and fears" [45, p. 84] has been added.

Age: Not specified.

Time: Not specified.

Scores/norms: Not available.

Publication date: 1940 [French], 1946 [English].

References: [25, 100, 101].

3.2.13. Rosenzweig Picture Frustration test (PFT)

Description: The PFT consists of 24 sketches of a situation, in which one person tells another person a frustrating sentence in a speech bubble. The other speech bubble is empty, and the proband is instructed to fill out a suitable answer.

Aim: The PFT aims at describing a person's frustration tolerance.

Age: 6–14 (child version), 14–85 (adult version).

Time: 15–20 min.

Scores/norms: A frustrations profile can be depicted, containing aggressive reactions, self-incrimination, resignation, evasive manoeuvres, and personal initiative.

There are norms available from 320 probands containing quartiles and median values.

Publication date: 1957.

References: [27].

3.2.14. MacArthur Story Stem Battery (MSSB)

Description: The material in the MSSB consists of human miniature figures, for example, bendable dolls, or Playmobil® figures. The figures should include "mother, father, grandmother, older and younger siblings [...], additional children [...], and a family dog. It is important that the figures can stand up and that they match the child's racial background if human figures are used [26]." Additional material can be provided, such as furniture, dishes, etc.

Then the child is presented the beginning of one of 14 "story stems," all dealing with moral and relationship dilemmas. The child is asked to "show and tell what happens next." The answers are videotaped and rated later on.

Aim: The story stem techniques aims at creating a narrative of specific interpersonal situations. It has been used in attachment studies as well as in mood disorders, or aggressive behaviour.

Age: 4–8 (but other ages may also be included).

Time: Not specified.

Scores/norms: Several approaches for rating scales have been developed with regard to “(1) story content or themes, (2) theme organization or coherence, (3) emotional expression, and (4) interaction with the interviewer,” [26] for example the MacArthur Research Network on Early Childhood Transitions (1983–1992, www.macfound.org), published the MacArthur Narrative Coding System (MNCS) [102].

Publication date: 1992.

References: [103, 104].

3.3. Playing arts

3.3.1. *Lowenfeld Mosaic Test (LMT)*

Description: The test contains of five colored wooden shapes: square, isosceles triangle, equilateral triangle, scalene triangle, and rhomboid. Each shape is available in red, blue, yellow, black, green, and white and arranged in a box in this order. Then the box is presented to the child together with a tray containing white paper. Recently, templates have been provided with different patterns, which may be useful for younger children, or for standardization purposes.

Aim: The LMT has been used to assess mental ability and developmental state, school readiness, mental disorders like schizophrenia and traumatic brain injury. It can be applied for assessing the functional capability of patients or clients, or as a tool for the expression of an inner world. The LMT has been used for diagnostics and psychotherapy. Moreover, it has been used in anthropological studies, as a means on nonverbal communication.

Age: Not specified.

Time: Not specified.

Scores/norms: The picture can be seen under the aspects of the individuality of the answer [105]. The child is asked to describe the picture, for example, its representation, or abstract pattern, with regard to its meaning. Additionally, the way of choosing the material and composing the picture is of interest.

Publication date: 1950.

References: [28, 106, 107].

3.3.2. *Structured doll play test (SDP)*

Description: The test consists of pictures of backgrounds and furniture and cardboard figures of a doll family. The child is presented with 18 structured situations and asked to make behavioral choices.

Aim: The test aims at finding mature and immature behavioral responses as well as at identifying.

Age: 3–11.

Time: Not specified.

Scores/norms: Not available.

Publication date: 1959.

References: [30, 108].

3.3.3. *Sceno test*

Description: The Sceno test consists of 16 doll-like figurines of different sex and age (8 adults and 8 children), animals (chicken, crocodile, and a big cow), wooden bricks, small dishes, a train, a deck chair, a lavatory and several others.

The child is instructed to build “a scene, as on stage, or for a movie” on the tray provided.

Aim: The Sceno aims at depicting relations and conflicts of the child’s inner and outer world. It can be used to assess mental ability, psychodynamics of relations, conflicts, and structure.

Age: 3+.

Time: Not specified.

Scores/norms: The Sceno Test can be evaluated with regard to the playing behavior (attitude, presentation, verbal accompaniment, attention and “flow,” handling of the material), final scene (formal aspects like number of figures used, order of the tray, relation of the figures) and the following exploration of the child (reality, desire, and fears).

Data on several hundreds of patients are available [summarized in 109], mainly children with behavioral disorders, organic brain disease, or “neurotic” and psychosomatic disturbances [110]. There are data available on reliability, validity and objectivity of the test.

Publication date: 1951 [1938].

References: [109, 111–113].

3.3.4. *Children’s World test [Kinder-Welt-Test] (KWT)*

Description: The Children’s World test consists of nine themes (family, school, fairy tales, science fiction, warriors, wildlife animals, domestic animals, water world, and rescue and help). The material is mostly from Playmobil® (figures and animals), supplemented with wooden blocks and fence posts. (The manual describes 31 blocks, but this is not apodictic: 19 larger blocks, 8 blocks with holes, and 4 fencing posts.)

The theoretical basis of this test is the gestalt therapy, and systemic approaches.

Aim: The tests aims at describing the formal storyline, the choice of the theme in the context of actual and biographical data, formal aspects of the gestalt therapy with regard to a polarity profile [114].

Age: 4–13.

Time: max. 30 min.

Scores/norms: Not available.

Publication date: 2006.

References: [115].

3.3.5. *World technique/sandplay therapy/expressive sandwork*

Description: In the 1920s, Margaret Lowenfeld developed a method later called the World technique, which uses sand trays, miniature figures, models, and toys to express feelings and thoughts without words.

In the 1950s, Dora M. Kalff transferred some aspects of the World technique into the Sandplay therapy. Now, the sand tray is standardized ($72 \times 57 \times 7 \text{ cm}^3$), but the material used in the sand is not specified. Mostly, each therapist collects material on his / her own. Miniaturized figures of human and super-human beings, animals, plants and woods, inanimate nature like rocks and stones, fossils, or shells, can be found. The theoretical background is laid on the work of C. G. Jung.

In the 1990s, the term expressive sandwork was created.

Aim: The aim of these techniques is to create and activate an imaginal realm in which the unconscious can be expressed symbolically. In a nonverbal, nondirective approach, a sand image is created, containing archetypal, symbolic, and interpersonal elements of the inner and outer world.

Age: Not specified, but 3+ recommended.

Time: Not specified.

Scores/norms: Not applicable.

Publication date: 1929 (World Technique), 1980 (Sandplay Therapy); 2002 (Expressive Sandwork).

References: [31, 32, 116].

3.3.6. *Miniature figure play with the PlaymoCase (Plämokasten)*

Description: The PlaymoCase [Plämokasten] is composed of plastic figures from Playmobil® sets. The figures are sorted thematically in three levels in a metal case.

Level 1 contains humans, subdivided in men, women, adolescents, children, a royal family, knights, pirates, American Indians, fantasy figures like ghosts, a mummy, a fairy, goblins, and unicorns. Then there are wildlife and zoo animals, like deer, elephants, apes, giraffes, a camel, fish, a shark, lions and tigers, a crocodile, and farm and domestic animals like horses, cows, pigs, sheep, chicken, rabbits, hedgehogs, squirrels, dogs, and cats.

Level 2 contains boxes and baskets, trees, fences, material for a construction site, a garden, furniture from a living room, and objects from a household, like knives, spoons, forks, and

dishes. Then there is a treasure, weapons, carpets, flowers, and alimentary goods. Next, furniture from a kitchen and a bedroom is provided. Next a classroom and a room in a pediatric hospital.

Level 3 contains larger components like plastic bases for a fortress, the jungle, and the construction site.

In a nondirective play therapy approach, the child is free to choose any material required from the case.

Aim: The case can be used for diagnostic and therapeutic purposes. The technique aims at providing a projective space for the child to create a scene or sequence of its unconscious. Moreover, an interaction with the therapist is possible, enabling interpretation and dialogue.

Age: 3+.

Time: Not specified or restricted. An individual session can last the whole hour of therapy.

Scores/norms: Not available. Currently, an empirical clinical study is being initiated to address this question.

Publication date: 2013.

References: [19, 117].

4. Projective approaches in play therapy

In the previous section, we have seen the use of projective techniques for diagnostic purposes. Additionally, projection is an important means of therapy. Hence, specific therapeutic approaches have been developed making use of the mechanisms of projection. These approaches include psychoanalysis, imaginary therapies, and play therapy. Whereas play therapy is seldomly used in the counseling of adult patients, it seems to be a standard procedure in child therapy, often even implicitly, meaning that sometimes the therapist is not aware of the projective (and counter-projective) elements in the therapy. In the definition of the Association for Play Therapy (APT, www.a4pt.org), play therapy is “the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development [118].” In the following section, we will concentrate on play therapy and describe several projective techniques in play therapy.

4.1. Typical forms of children’s play

Child’s play has been grouped in to different subtypes [46] such as (i) toy and object-based play, for example using balls, dolls, or puppets, (ii) narrative plays, such as story-telling and reading / book-based approaches, (iii) role-playing, including costumes and masks, (iv) creative arts, which comprehends drawing, painting, sculpting, for example with clay, wood, or stone, dancing, or playing music instruments, (v) fantasy approaches using figurines and

miniature world material, and (vi) game play techniques such as strategy and cooperative games, squiggles, or chance games involving boards and cards.

In our view, there is a certain overlap in play therapy approaches, since the before mentioned definition is based on objects or material, not methods. Despite the respective approaches chosen, projection can occur with all of these.

4.2. Projection in child play

In the early twentieth century, play therapy was developed by psychoanalysts in the context of psychoanalysis for children, since it has become obvious that a “talking cure” based on a highly developed system of speech to express-free associations was not suitable for the therapy of children.

In a main assumption of the psychodynamic theory, intrapsychic elements are projected onto outer objects such as play material, especially figurines [119]. This, for example, opens the way for identification and, thus, projective identification. Of note, there is a clear difference between identification processes and the interpretation of the therapist [120]. Even “obvious” scenes occurring during play may have a totally different origin and background. Therefore, it is wise for the therapist not to provide interpretation of the patient’s creation, but to reveal its meaning for and with the patient. For example, the therapist’s interpretation based on (counter-) projection and projective identification, in a technique making use of externalization in cases of domestic violence or sexual abuse, and anorexia nervosa, may trivialize and minimize the problem, and may lead to misinterpretation [121].

Children make use of figurines for example to describe the dynamics in their relationships to their parents, siblings, friends and classmates, teachers, and other people of their world. Moreover, figurines give the child the possibility to externalize different inner self-objects and attribute their properties to different characters.

Play is not only an ethological component of child development, but also a therapeutic tool. A number of therapeutic factors of play have been identified and described as the “Therapeutic Powers of Play [122].” These include play as a form of self-expression and nonverbal communication, a possibility of gaining access to the unconscious, a direct and indirect form of teaching, a possibility for stress inoculation, a method for counter-conditioning of negative effects, abreaction and catharsis, chance of the creation of positive effects, the enhancement of attachment and amelioration of relationships, the development of moral judgment, empathy, and sublimation, the exertion of power and control, mastery, the increase of competence and self-control, a growing sense of self, developmental acceleration, encouraging creative problem solving, fantasy compensation, reality testing, behavioral rehearsal, and rapport building [122, 123].

4.3. Special forms of play therapy using projective mechanisms

In general, two main approaches in play therapy can be distinguished. Directive play therapy describes interventions in which the therapist initiates and structures the

patients play activities, whereas nondirective play therapy approaches leaves the responsibility and direction of the play during each session to the patient [124]. Both approaches enable projection as a mechanism to address intrapsychic issues, but in general nondirective approaches makes the occurrence of projective mechanisms much easier. Moreover, in psychodynamic therapies, projection is necessary for the technique applied. A not exhaustive overview over current forms of play therapies is presented in **Table 2**.

In the following sections, two approaches are described in more detail, sandplay therapy, and a form of psychodynamic play therapy.

1. Psychodynamic Therapies

Psychoanalytic Play Therapy (A. Freud, M. Klein, D. W. Winnicott)

Adlerian Play Therapy (A. Adler)

Jungian Play Therapy (C. G. Jung)

Sandplay Therapy (D. Kalff)

2. Person-Centered (nondirective) Play Therapy

Child-Centered Play Therapy (V. Axline)

Relationship Play Therapy (C. Moustakas)

Experiential Play Therapy (B. Norton, C. Norton)

3. Other Forms

Gestalt Play Therapy (F. Perls, V. Oaklander)

Art Therapy

Ecosystemic Play Therapy (K. O'Connor)

Ericksonian Play Therapy (M. Erickson)

Solution-Focused Play Therapy (M. Selekman)

Animal-Assisted Play Therapy (AAPT)

4. Behavioral Play Therapy

Cognitive-Behavioral Play Therapy (CBPT) (S. M. Knell)

Parent-child Interaction Therapy (PCIT) (T. L. Hembree-Kigin, C. B. Mcneil)

5. Systemic (Family) Play Therapy

Dynamic Family Play Therapy (S. Harvey)

Strategic Family Play Therapy (S. Ariel)

Family Play Therapy for young children (T. G. Hardaway, L. Carey, E. F. Wachtel)

6. Preschool Children Play Therapy

Filial Therapy (FT) (B. Gurney, L. Gurney)

Developmental Play Therapy (DPT) (V. A. Brody)

Theraplay (A. M. Jernberg, P. B. Booth)

Table 2. Forms of play therapy (compiled from [10, 124, 125]).

4.3.1. *World technique/sandplay therapy/expressive sandwork*

Description: In the 1920s, Margaret Lowenfeld developed a method later called the World Technique, which uses sand trays, miniature figures, models, and toys to express feelings and thoughts without words.

In the 1950s, Dora M. Kalff transferred some aspects of the World Technique into the Sandplay Therapy. Now, the sand tray is standardized ($72 \times 57 \times 7 \text{ cm}^3$), but the material used in the sand is not specified. Mostly, each therapist collects material on his/her own. Miniaturized figures of human and super-human beings, animals, plants and woods, inanimate nature like rocks and stones, fossils, or shells, can be found. The theoretical background is laid on the work of C. G. Jung.

In the 1990s, the term expressive sandwork was created. It is based on the assumption that any sand tray creation is an expression of the client's inner world.

Aim: The aim of these techniques is to create and activate an imaginal realm in which the unconscious can be expressed symbolically. In a nonverbal, nondirective approach, a sand image is created, containing archetypal, symbolic, and interpersonal elements of the inner and outer world.

Age: Not specified, but 3+ recommended.

Time: Not specified.

Scores/norms: Not applicable.

Publication date: 1929 (World Technique), 1980 (Sandplay Therapy); 2002 (Expressive Sandwork).

References: [31, 32, 116].

4.3.2. *Psychodynamic play therapy with miniature figures using the PlaymoCase (Plämokasten)*

Description: The PlaymoCase [Plämokasten] is composed of plastic figures from Playmobil® sets. The figures are sorted thematically in three levels in a metal case.

Level 1 contains humans, subdivided in men, women, adolescents, children, a royal family, knights, pirates, American Indians, fantasy figures like ghosts, a mummy, a fairy, goblins, unicorns. Then there are wildlife and zoo animals, like deer, elephants, apes, giraffes, a camel, fish, a shark, lions and tigers, a crocodile, and farm and domestic animals like horses, cows, pigs, sheep, chicken, rabbits, hedgehogs, squirrels, dogs, and cats.

Level 2 contains boxes and baskets, trees, fences, material for a construction site, a garden, furniture from a living room, and objects from a household, like knives, spoons, forks, and dishes. Then there is a treasure, weapons, carpets, flowers, and alimentary goods. Next, furniture from a kitchen and a bedroom is provided. Next a classroom and a room in a pediatric hospital.

Level 3 contains larger components like plastic bases for a fortress, the jungle, and the construction site.

In a nondirective play therapy approach, the child is free to choose any material required from the case.

Aim: The case can be used for diagnostic and therapeutic purposes. The technique aims at providing a projective space for the child to create a scene or sequence of its unconscious. Moreover, an interaction with the therapist is possible, enabling interpretation and dialogue.

Age: 3+.

Time: Not specified or restricted. An individual session can last the whole hour of therapy.

Scores/norms: Not available. Currently, an empirical clinical study is being initiated to address this question.

Publication date: 2013.

References: [19, 117].

5. Discussion and conclusions

Projective methods are widely used tools in the assessment of child and adolescent mental health. Whereas in adult assessment, projective techniques lost their predominant position over the last decades [126–129], they are in second position in child and adolescent outpatient clinics after intelligence testing [130]. Moreover, the discussion about the psychometric properties of projective tests is unsolved. With regard to the literature, one must carefully address each test: there are tests with excellent validation parameters, large study samples, normalization data, and standardized evaluation, whereas others remain obscure in technique and interpretation and provide unsound results.

The classification of projective tests has been stable since more than 50 years, but there is a certain shift and extension towards the use of computers from the paper-and-pencil-based approaches. Surprisingly, the stimulus material did not change over the years, sometimes there is revised material (for example, modern plastic figurines instead of dolls, or updated pictorial material in thematic apperceptive tests), but in general, the basic principles associated with the material remains constant.

The theoretical background of projective methods has been enlarged by both the expansion of the psychoanalytic theories and neurobiological findings, such as mirror neurons as morphological basis of the mechanisms of mentalization [131]. Moreover, the field of affective neuroscience provided evidence for the neuroanatomical location of drives through emotional circuits, corresponding to Freud's concept of the dynamic unconscious [132].

With regard to therapy, projection is the main mechanism in play therapy approaches. Having introduced the concepts of play therapy, two forms of play therapy approaches are described in detail. In this sense, projection is also the main constitute of a therapeutic agent.

In conclusion, projective methods provide useful methods for the assessment of psychological questions when appropriately used. Novel standardization of psychodynamic processes can help to reevaluate the benefit of projective methods.

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