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SIS J. Proj. Psy. & Ment. Health (2025) 32: 1, 01-04

Editorial:

Artificial Intelligence (AI) and its Potential in Personality Assessment and Projective Testing

Despite copious criticisms and drawbacks leveled against Artificial Intelligence (AI) over recent years, the field of Psychology continues to realize the emergent potential of machine learning and AI across most sub-disciplines within its purview (Botvinick, 2022; Dwyer et al., 2018; Gado et al., 2022; Murphy, 2022, Piotrowski, 2025). An online *keyword* search of *PsycINFO* revealed an extensive bibliography (nearly 12,000 articles; 600 dissertations), specific to the topic of AI. In fact, the term 'Big Data' has become a popular scientific moniker. But what encompasses the arena of Big Data? Researchers include source data such as biographical information, read outs from personal data garnered from modern digital technologies (i.e., sensors in wearable devices, user smartphone logs, GPS positioning, applications usage, music preferences, financial transactions, fitness data), and the cascade of data generated from social media use and interaction (Hinds & Joinson, 2024; Stachl et al., 2020). Proponents claim that visual images and personal videos provide interesting incremental information (and hypotheses?) unique to an individual (Jordan & Mitchell, 2015). Yet critics espouse caution on the validity of big data approaches that use social media text data for the assessment of personality (Alexander et al., 2020; Liou et al., 2022; Tay et al., 2022).

Despite these concerns, others highlight the potential applications of AI for psychological assessment and mental health diagnostics (e.g., Maurya et al., 2024; O'Conno, 2024; Zhou et al., 2022). Based on scientific attributes like the incorporation of 'Big Data' and predictive efficacy, AI appears to be a potentially ideal methodological mechanism in the a) application to clinical data obtained via both objective and projective measures, and b) development of an assessment protocol specific to the research and clinical determinants of personality assessment. Thus, advances in machine learning models and Big Data analytics have generated profound clinical attention to the study of personality and, concomitantly, to applications in individual psychological assessment (Bleidorn & Hopwood, 2019; Fokkema et al., 2022; Iliescu et al., 2022; Stachl et al., 2020), including personality scale development.

Recent studies suggest that AI has potential for the study of personality and, more directly, personality assessment based on biographical data, natural language processing (NLP), collateral records, and interview protocols. Hence, clinical data garnered from projective assessment could be supplemented by AI source data, such as digital traces of behavior from an individual's social media interactions and / or ecological/ambulatory record. On a cautionary note, clinicians need to be cognizant of the fact that 'additional' data does not necessarily translate into an increase in incremental validity or clinical prediction. Furthermore, with the exponential advances in AI technology, clinicians will need to stay abreast of the emergent 'big data' literature and with novel nomenclature (e.g., *visibility*, *veracity*, *random forests*, *value*, *messy matrix*).

Noteworthy, a recent special issue of the *European Journal of Psychological Assessment* was devoted to a discussion of the potential of AI for psychological assessment and test construction (Bibantz et al., 2024; Iliescu et al., 2022). This prompted an examination of the recent extant literature that fostered a bibliographic template on key studies on the AI-Personality Assessment nexus. An online search of articles, indexed in the database *PsycINFO* over recent years, on the topic of personality assessment and 'Artificial Intelligence' (AI) identified an emerging view of scholarship on this issue. The Table below presents a brief

synopsis of studies that shed some light regarding the potential applications of AI to advances in personality assessment.

Table 1. Studies that discuss the potential of AI for the field of personality assessment

Study	Major Findings / Discussion
Alexander et al. (2020)	Authors discuss the opportunities and challenges for personality researchers posed by using 'Big Data' methodologies in personality measurement; due to variance of big data, random irrelevancies can lead to confounding effects which can add random errors to personality factors such as participants' demographics, individual temperament, and situational influences.
Fan et al. (2023)	Via an AI Chatbot, textual features obtained from users' free-text responses are applied to machine learning algorithms to infer personality scores; This evaluation exhibited incremental validity over self-reported personality scores.
Fokkema et al. (2022)	Language, text, audio, video and sensor-based data provide novel approaches in the assessment of psychological (and psychopathological) traits; Modern machine learning methods provide flexibility for modeling these copious predictor variables for psychological assessment purposes.
Hernandez & Nie (2023)	Based on natural language-based models, AI can assist in item-pool selection for measuring a desired construct. This study offers a novel technique to the personality scale development process which minimizes the need to modify or revalidate scale items.
Hinds & Joinson (2024)	Based on 'Big-Data' analytics, these authors demonstrate that personality traits can be predicted using digital data based on machine learning algorithms. The Big Five personality traits were the focus of the study.
Tay et al. (2020)	With a focus on social media text mining, these authors discuss the drawbacks on the use of machine learning approaches in the assessment of personality.

Based on emergent research outlined above, it is quite apparent that AI technologies can have a monumental impact in the applied and social sciences pertinent to the field of personality assessment. Copious data on the individual can be amassed from various sources, including specific behavioral, social, and physical attributes evaluated via ecological and ambulatory assessment methods (Seizer et al., 2024). Yet, the inherent potential of 'big' data' analyzed via machine learning/AI methods does pose serious challenges and concerns for personality researchers and practitioners. Major issues such as a) degree of incremental validity, b) efficacious outcome prediction, c) contribution of unique personality variance, d) influence of 'noisiness' of trace data, e) privacy, and f) systematic confounds, referred to as *algorithmic bias* (see Alexander et al., 2020 for a discussion). Since personality assessment is a clinical decision-based enterprise, concerns about the validity of Machine Learning/AI systems due to lack of transparency and interpretability continue to remain a challenge for the psychological assessment field for the near-term future (see BiBantz et al., 2024; Kuper & Kramer, 2024). Despite these limitations, the current discussion should provide an aspirational framework for the potential application of emergent AI technologies to advances in the field of personality assessment (Boyd et al., 2020; Gondalez, 2021; Iliescu & Greiff, 2019). In a recent AI study, Kim et al. (2024) applied drawings in an analysis of psychological state. Thus, going forward, AI will be both an opportunity and challenge for the field of mental health assessment and for clinicians engaged in personality and projective assessment.

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Presidential Address: Use of Projective Tests in Promoting Mental Health

Distinguished Chief Guest, Dr. Manoj Kumar, Director, DRDO Agra, Prof. Dinesh Singh Rathor, Director Institute of Mental Health & Hospital, Agra, Prof. Anil Sisodiya, Dr. Antonio Cervigni, Prof. Naveen Gupta, Director, HIMCS, and Satyadhar Dwivedi Organizing Secretary of the 11th International conference, Foreign and Indian delegates, professional friends and students, Members of the Organizing Committee, Office bearers of Somatic Inkblot Society, ladies and gentlemen!

On behalf of the members of the Organizing Committee of 11th SIS International Conference at the Institute of Mental Health & Hospital, Agra and Somatic Inkblot Society, I welcome you to this conference. The theme of the conference is "Use of Projective Tests in Promoting Mental Health".

Today, we gather to celebrate 35 remarkable years of the Somatic Inkblot Society's dedication to advancing mental health. In 1990, our society was born with a singular focus: harnessing projective psychology, personality assessment, psychotherapy, and mental health research. Our flagship instrument, the SIT, has evolved into a powerful personality assessment, diagnostic tool, and therapeutic procedure. Our relentless efforts have yielded 30 years of invaluable data on the Indian Population - clinical, organizational, and normal groups.

The brand-new Somatic Inkblot Test called SIT 30 was made available in 2018 after six years of development and trials led by Anand Dubey (Dubey, Banerjee & Dubey, 2019). The online test was developed specifically to help people in remote areas. The client can take this test from the comfort of their home.

The Test is based on spontaneous, individually generated responses to inkblot images/ figures, which elicit intrapsychic associations specific to the person taking the test. The images evoke symbolism and meanings unique to the responding individual. The test responses can be differentiated from peer norms and clinical indices and can be analyzed according to internationally recognized psycho-diagnostic criteria. The procedure is an adjunct to psychotherapy because the responses can be further explored to create a more effective treatment plan, and can be re-addressed in later discussions, providing opportunities to elicit deeply defended unconscious material (Cassell, 1980, Cassell & Dubey, 1998, 2003, Dubey & Cassell, 1993, Dubey, Banerjee & Dubey, 2019, Dubey et al, 2005).

The SIT has only 11 scoring indices common to Rorschach Inkblot Test and Holtzman Inkblot Test (such as: Total number of Responses, Human, Animal, Anatomical and Sex Responses, Other Responses, Most Typical and Typical Responses, Movement Responses, Rejection of images and Pathological Responses- Pathological Anatomy Scale, Hostility Aggression Scale, Depression Scale and Paranoia Scale (Dubey & Dubey, 2012, 2018,).

We've conducted countless workshops, and seminars in several countries, and published our esteemed publication the "SIS Journal of Projective Psychology and Mental Health" since 1994. I congratulate Prof. Naveen Gupta and the editorial team for the timely publication of the Journal for the last 10 years. I am happy to inform you that the SIS Journal has been listed in the academic research database ProQuest Psychology Journals™. ProQuest is a company in Michigan, United States. It is a leading provider of electronic databases for academic libraries. Databases are used in over 20,000 academic libraries around the world including some of the most prestigious higher education institutions such as Harvard, Yale, Princeton, Oxford etc. ProQuest provides abstracts and indexing for more than 640 titles, with over 540 titles available in full text. Users get access to charts, diagrams, graphs, tables, photos, and other graphical elements essential to psychological research.

The Future - AI-Enabled Testing

Artificial intelligence heralds the next leap! We're integrating AI for: Content analysis, Automated Scoring and categorization, and informing therapy models with 35 years of Indian data. AI helps psychologists and students in the scoring of the RESPONSES by providing HINTS and FACTS. Unlike various systems of Rorschach, you don't need to consult a Manual while Scoring and Interpreting the responses. Even "Rejections of Images" are analyzed, and various plausible explanations and interpretations are provided. The SIT-30 is a leader in online AI-enabled projective testing.

As I stand before you, I'm reminded of our founding members' tireless efforts. We worked together from 1988 onwards and published several research papers. I am grateful to Anand Dubey for his efforts to develop the SIT – online version with an application of Artificial Intelligence.

Tribute to Dr. Cassell

We honor Dr. Wilfred A. Cassell's legacy, whose baton I humbly carry forward. Dr. Cassell suffered from Dementia in 2015 and handed over the test to me. Dr. Cassell left us on 19 September 2023, but his spirit is always guiding us for future work. We are completing the unfinished business and developing the SIT procedure. Join us in shaping mental health's future! Together, let's embark on this exciting journey, merging AI and expertise to revolutionize mental health care.

Future Direction:

In the years to come, psychologists throughout the world must follow the model of Artificial Intelligence in assimilating and comparing international data to understand the complexities of unconscious behavior. Certain indices may work as international norms, whereas other indices serve as the norms of a particular population/ group. The responses given by the client should be interpreted to explore its content and symbolic significance. For example, while interpreting "Animal" responses on an inkblot test, the average or the mean and its ratios will not yield relevant findings rather it will lead to wrong conclusions. Alligators, Baby Crocodile, Gorilla, Horse, Calf, Cat, Chicken, Dog, and Lion, all are categorized as "Animals" but they have different natures. They indicate different interpretations. The Alligator/ Lizard may indicate negative attitudes (Philips & Smith), Baby Crocodiles may indicate rejection of adult role (Schafer), Bull /Buffalo / Gorilla/ Horse may indicate ambivalence toward domineering father ((Philips & Smith), Calf may indicate domination by father (Philips & Smith), Cat may indicate immaturity (Klopfer-Davidson), Chicken may indicate deprivation of affection and feeling of rejection, immaturity (Philips & Smith), Dog may indicate passive dependency (Klopfer-Davidson), Lion may indicate demanding, dependent, passive-aggressive. Similarly, other animal responses have different symbolic interpretations which must be kept in mind while doing quantitative interpretation. Pointed out Fingers, Masks, and Eyes are strong indicators of Paranoia and early Schizophrenia.

It is equally important to understand why a person is unable to perceive a particular image. Each image is found to depict a theme/ area such as smooth relationship or conflict with father, mother, siblings, peers, opposite sex; deprivation of affection during early childhood, broken love affairs, broken family etc., hence rejection of such images has a lot of clinical significance. The rejection may help in understanding the client's reactions to different situations presented through the inkblot imagery. The avoidance of such images may further be probed to understand the painful material underlying in the storage of the unconscious mind. Because of such relevance, the rejection of images has been given much importance while interpreting the SIT protocol of a client.

When a person is unable to perceive an image even after providing the common responses given by most people, it can be taken as rejection. It has been noticed that people reject images, which depict certain precepts related to their traumatized experience or underlying painful memory. For example, a person having poor interpersonal relationships may reject images 6, 9, 18, 19, 20, 28, and 30 because these images project human content. Poor interpersonal relationships with spouses may also lead to rejection of images 5, 6, 9, 15,

17, 18. Images like 15 and 23 project more erotic content. Since the erotic area is disturbed because of poor relationships, people (he/she) may not feel like responding to anything in this image. Similarly, it has been noticed in clinical samples of cardiac cases that persons suffering from heart problems reject images depicting a heart - for example images 3, 11, and 22. A few patients who have recovered and have accepted their clinical problems bravely do perceive 'a heart' in these images. It suggests that they have no fear regarding their heart as they have been properly counselled. Persons suffering from body ailments, for example, Kidney problems generally reject image 12, which depicts Kidneys. It has also been noticed that females traumatized sexually find it difficult to perceive images 15, 17 and 23, which generally project erotic response. Since these people have undergone traumatizing experiences and have unpleasant memories of the precept, they may find it difficult to perceive anything in these images. Even if they perceive something, often they give poor-quality responses and attach a special meaning to it. It should be kept in mind that the material which follows needs to be assimilated by the experienced clinician with the overall medical and psychiatric history data. Even certain contents from dreams and visual hallucinations also help in arriving at diagnostic evaluation and therapeutic planning.

The help of "Artificial Intelligence" in the assimilation and interpretation of data has worked in a big way. The mental health professionals using SIT will have the advantage of AI and Symbolic Interpretation while scoring and interpreting the responses given by the client. Inkblot-evoked images can highlight otherwise hidden aspects of the inner emotional world of the clients. These may reveal to the professional past traumatic events and unexpressed distressing emotions, which might otherwise only surface in disguised symbolic dreams.

The mental health professionals using the SIT procedure will be able to hear the inner cry of the suffering individuals and travel in the unconscious space of the client to find other underlying painful materials that need processing.

India has long been revered for its rich contributions to Yoga, Meditation and Healing. The responses projected on SIT images can help the client address the traumatic experiences and sufferings during Hypnotic relaxation, Yoga Nidra, Meditation and Psychotherapy. Image-focusing exercise techniques can eventually lead to positive body–mind–spirit healing effects. As one of the pioneers of this procedure, I visualize that the SIT will be used by a large number of professionals internationally in the future.

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Creativity Research in a Business Context: Implications for Assessment

John D. Watt & Chris Piotrowski

The construct *Creativity* has been the subject matter of voluminous, interdisciplinary research and has attracted extensive scholarly attention for many decades. While the topic of creativity attracts the attention of a diverse range of scholars in the field of psychology, recent bibliographic studies have confirmed that creativity is an active area of study in the area of I/O psychology. Hence, it would be informative to examine contemporary scholarship on the subject matter of creativity and its diverse applications in the business world. To that end, the current study presents a brief summary of recent scholarly articles on the nexus of creativity applied to organizational settings. In an intensive overview of contemporary (2016-2024) studies in this area, the authors identify 20 key articles that represent this body of research and present a brief synopsis of each study. The main areas of research focus were the wide span of international and cross-national investigations, myriad theoretical perspectives applied to organizational dynamics, and employee/team creativity as a function of different leadership styles. These findings have implications for assessment in that the potential for creative response patterns of business personnel may be a prominent feature evident in projective testing.

Introduction:

Due to its complex nature, the study of creativity appears to be faced with a myriad of perennial challenges and is presently at a crossroads due to its unsettled state (Glaveanu et al., 2020). At the same time, Mejia et al. (2021) claim that the investigatory body of scholarship on creativity is accelerating at an exponential pace. In a bibliometric analysis of nearly 2,500 peer-reviewed articles (2017-2023), specific to the topic of *Creativity*, Piotrowski (2024) found that 16% of the dataset involved scholarly research on areas related to business settings (i.e., teams, employee creativity, organizational life, leadership, marketing, entrepreneurship).Indeed, creativity and innovation are the foundation of modern organizations' productivity and competitive advantage (Mumford, 2012), as demonstrated across several bibliometric studies specific to the business literature (Landstrom et al., 2012; Merigo et al., 2015). Moreover, a 2010 IBM study of CEOs across 60 countries and 33 industries confirmed that organizational creativity is the key vital determinant of sustainable market performance. According to Boso et al. (2017), the increasing complexity of global business activity, characterized by rapid technological change and turbulence, is the major impetus of current research activity. Yet, Hemonnet-Goujot et al. (2022) contend that while creativity is a central concept across managerial disciplines, scholarly interest in organizational creativity is a rather recent development. Hence, it would be informative to examine more closely the breadth of emerging scholarship regarding the subject matter of creativity with specific applications to the business world. In fact, bibliographic reviews, as an investigatory approach, are well-regarded in the field of management (Fisch & Block, 2018). Thus, the focus of the current study is to scan and review this select body of creativity research and identify *key* studies that reflect the substance and nature of contemporary scholarly work linked to I/O perspectives.

Overview of the Field

As the topic of creativity is viewed from a wide spectrum of theoretical perspectives, it is apparent that researchers approach research designs based on copious theories and conceptual models (Beaty & Kenett, 2023; Glaveanu, 2020; Glaveanu & Kaufman, 2020; Glaveanu et al., 2020; Piotrowski, 2017).This focus on theory/models is probably attributed to the general lack of consensus regarding construct issues

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(Acar et al., 2019; Pichot et al., 2022), typology, and taxonomy encompassing the basic definition of creativity. Hence, the field appears to reside in an unsettled, contentious state due to the perennial scholarly discussion, and at times debate, regarding conceptual matters (see Doyle, 2022; Glaveanu & Beghetto, 2021; Ishiguro et al., 2022; Kaufman & Beghetto, 2023; Malinin, 2019; Plucker, 2017; Puryear & Lamb, 2020).

In the context of organizational and business settings, there is currently extensive emphasis on creativity related to teams (Asencio et al., 2023; Byron et al., 2023; Yao et al., 2022; Yuan et al., 2022; Zhang et al., 2022; Zhou & Verburg, 2020), and confluence of leadership styles, particularly the LMX model (see Table 1). In a review of virtual teams' research, Gilson et al. (2015) identified major 'themes' such as globalization, leadership, and effective outcomes. Perhaps reflecting the competitive business environment, investigators in the field are devoting much research attention on factors that contribute to and enhance employee creativity (Zhou & Shalley, 2008). Based on the nexus of creativity and the modern business environment, the authors selected 20 key research studies from the recent literature (2016 -2024) that best represented the breadth and scope of current research in this investigatory enterprise. Table 1 presents a brief synopsis of this bibliographic profile of scholarly endeavors.

Table 1. Key Contemporary Business Research with a Focus on Creativity

Study	Research Focus	Method	Major Finding
Hou et al. (2024)	Effect of entrepreneurial leadership on employee creativity	Longitudinal design; survey data; 47 leaders, 352 employees; Chinese tourism firms	Analysis supported the cross-mediation model, based on surface acting and work-related flow in support of impact on employee creativity.
Bledow et al. (2024)	Does personality dynamics moderate the relationship between mood states and creativity	210 participants; action-state orientation & reported mood over 5 days	High levels of creativity were observed when negative affect declined, and self-motivation declined. Thus, personality is instrumental in creativity.
Zhang et al. (2023)	Effect of time- pressure on employee creativity	203 employees & their supervisors; Time-lagged analysis	Time pressure hampered employees' creativity by undermining their external scanning; Results have implications for the modern workplace where time scarcity is the norm.
Wang et al. (2022)	Grounded in self-determination theory, this study examined whether feedback-seeking from fellow team members fosters creativity	351 employees & their leaders; Three-wave lagged data	Feedback-seeking from team members tended to promote creativity via thriving at work; the effect was stronger for employees with elevated mindfulness levels.
Yao et al. (2022)	Examined when & how the pattern of team boundary spanning activity promotes creativity	70 teams; Multisource data at two timeframes	A curvilinear relationship was found, mediated through information sharing; Team goal interdependence was a critical factor.
Imam et al. (2022)	How status conflict in teams can pose a threat toward well-being and overall team creativity	245healthcare professionals, from 55 teams	Although status conflict did not impede team creativity, it fostered depersonalization among team members; however, social competency as a moderator can reduce negative feelings caused by status conflict.
Riva et al. (2021)	Assessed the impact of managers' "Green" knowledge and leadership style on the firms' environmental performance	363 managers in a myriad of managerial roles in the hotel industry	Green creativity was found to have a significant mediating effect regarding green knowledge and green transformational leadership; Green

			initiatives foster a company's environmental performance.
Aylesworth & Cleary (2020)	Examined key detrimental factors regarding creativity	College business student groups; didactic course exercises	Counteracting obstacles (i.e., fear of failure, tolerance for ambiguity, creative self-efficacy) reawakens creativity potential in business leaders.
Greenbaum et al. (2020)	Evaluated the concept of 'Bottom-line Mentality' on subsequent group creativity	Diverse sample of workgroups and their supervisors; Multisource, multi-wave field data	High levels of Bottom-line Mentality prompt a strong detrimental effect on group psychological safety, which then detracts from group creativity.
Pan et al. (2020)	How does employee-organization exchange (EOX) affect employee creativity	384 employees working with 64 supervisors in China	The effect of EOX on creativity via need satisfaction is more potent for employees with high quality LMX; Need satisfaction mediates the EOX-creativity relationship.
Ngo et al. (2020)	Studied the relationship between mindfulness and employees' performance on creative process engagement	180 employees at a professional service company	Results indicated that employee job performance was significantly affected by employee creativity.
Rosengren et al. (2020)	Tested different theoretical models to explain creativity as a success factor in advertising	Based on a meta-analysis of 93 datasets from 67 studies that provided 878 effect sizes	The effects of advertising creativity were stronger for high (vs. low) involvement products, and that the effects of ad (but not brand) reactions tend to be stronger for unfamiliar brands; Results confirm the importance of considering both originality when investing in advertising creativity.
Imam et al. (2020)	The purpose of this study was to understand the creativity mechanism that is supported by authentic leadership via commitment to the supervisor	Data from 214 employees from strategic units of 5 telecom firms in Pakistan	Results confirmed that creativity levels increase when employees feel empowered to an authentic leader; thus, empowered leadership fosters organizational creativity.
Kasimoglu & Ammari (2020)	Examined the mediating effect of employees' creative role identity on the major components of transformational leadership	688 mangers from conglomerate companies in Turkey and Algeria	Algerian managers acknowledge the critical role of employee creativity, whereas Turkish managers link creativity to the 4 components that depict transformational leadership.
Al Harbi et al. (2019)	Studied the link between transformational leadership and organizational innovation/employee creativity	Survey data from 503 employees in Saudi Arabia	A positive relationship was found for transformational leadership and employee creativity, particularly via the mediating role of employees' empowerment support for innovation, and openness to new avenues of learning.
Javed et al. (2018)	Examined the relationship between ethical leadership and employee creativity	Data from 205 supervisor-subordinate textile firms across Pakistan	Results showed that ethical leadership promotes creativity in the workplace; however, openness to experience in the context of trust in leaders and employee creativity was not supported.
Koseoglu et al. (2017)	Is subordinates' creativity related to supervisors' level of creativity?	443 employees under the direction of 44 supervisors in an IT firm	A positive association between supervisors' creative role identity and subordinates' creativity was found; This effect was stronger when

			employees perceived higher levels of organizational support for creativity.
Lussier et al. (2017)	Examined the role of humor usage in the context of sales interaction	149 salesperson-customer dyads, based on a cross-industry survey	Salesperson humor usage positively impacted creativity and customer trust; This effect mediated the influence of humor on objective sales performance.
Groza et al. (2016)	Investigated thinking styles in predicting salesperson creative selling behaviors	262 salespeople tested the conceptual model	Findings confirmed that judicial thinking style is linked to creative selling; Also, industrial and organizational knowledge of the regulatory environment moderates creative selling performance.
Eggers et al. (2016)	Does critical thinking enhance creativity and business performance	26 teams comprised of senior business students involved in a business start-up simulation.	Results showed that critical thinking influenced creativity, measured as the total number of unique product designs; The link between critical thinking, as a function of creativity, and entrepreneurship was supported.

Conclusion:

Creativity is not just incidental to successful business endeavors and organizational effectiveness, but also represents a motivational framework that impacts productivity of personnel. Creative thinking can assist in the identification of new opportunities, as well as challenge traditional, outdated ideas. Overall, the findings of the current analysis provide a succinct overview regarding recent scholarship on the subject matter of creativity and business life. Several observations are noteworthy: First, this area of research has attracted a wide breadth of investigatory interest from nations outside of the United States. Second, in addition to empirical work, research designs examine a myriad of theoretical perspectives which aim to explicate the multi factorial dynamics that encompass the nature of creativity applications in contemporary organizations. Third, there is extensive focus on the link between different leadership styles and employee/team creativity (Zarei et al., 2022). Based on this review of scholarship, emerging areas that should attract substantial research attention in business settings are: a) understanding the negative aspects of creativity (see Harrison & Nurmohamed, 2023), and b) the impact of AI in the generation and viability of creative ideas (Ameen et al., 2022; Vakratsas & Wang, 2021; West et al., 2019).

These findings have implications for the clinical assessment of business personnel. Projective tests have been used to measure creative personality by evaluating unconscious needs and motivations that may stimulate creative behavior. The most commonly used projective tests used in the assessment of creativity are the Thematic Apperception Test (TAT) and the Rorschach Inkblot Test (Villani & Antonietti, 2013). In the context of projective assessment, the individual's responses may be predominantly more a function of their occupational status rather than latent personality dynamics (see Fassbender, 1997; Ridgeway, 2017; Vaz, 2000). Hence, future research should specifically explore the extent that business people's creativity level may be more robust or expansive (or non-traditional) than non-business people, since being creative or "thinking-outside-the-box" often represents a more usual mode of functioning that impacts business success. Researchers, as well as clinicians, need to appreciate the moderating role of one's occupation and projective testing protocols.

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The Rorschach in the Assessment of Neurocognitive Functions: Applications in the Clinical Neurosciences

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Based on copious research findings, the Rorschach test can be considered an instrument that has the potential to assess critical cognitive functions. A systematic review of the scientific literature has indicated that when individuals observe an action, in absence of any visible motor activity, the cortical motor system is activated. In fact, previous studies have shown that viewing sentences that suggest movement activates the motor cortex. Recent studies have applied brain stimulation such as Repetitive Transacranial Magnetic Stimulation (rTMS) to investigate cortical activation for human movement on the Rorschach test and have suggested that attributing human movement to Rorschach stimuli (*M* responses) is associated with corticospinal excitability. In order to identify published research in this area, a systematic review of the literature indexed in the databases *Pubmed* and *Google Scholar* was conducted. Search terms were "*Neuroscience*" AND "*Rorschach Test*". Initial search output identified 51 publications, and a total of 11 studies were reported with inclusion criteria. Based on aggregated data, the results supported the utility of the Rorschach Test in studying neuropsychological and cognitive functions. In the light of this contention, the current study presents research evidence supporting the use of the Rorschach in the neuroscience field.

Introduction:

The Rorschach test (1942) consists of a series of 10 plates with ambiguous inkblots, in which the candidate must answer the question "what could it be?" In neuroscience field, the Rorschach task can be considered a valuable tool to assess cognitive functions, such as, perceptual and visuospatial abilities, associative memory, verbal skills, problem solving, emotions, and impulses (Jimura et al., 2021; Mento et al., 2019; Mento et al., 2020; Meyer, 2016; Piotrowski, 2017). Recently, Giromini and colleagues (2019a) introduced the concept of the *neurobiological foundation* of Rorschach interpretations. The authors proposed a parallelism between mental, verbal and perceptual behaviors that occur during Rorschach administration and those that occur in the external environment. Therefore, the same regions of the brain engaged by the candidate in the production of a given code should be identical to the ones engaged in reproducing, in the external environment, during the processing of the stimuli through perception. Viglione et al. (2003) provided a behavioral analysis of Rorschach response process that considered the nature of the behaviors occurring during the task and the generalization of these behaviors to similar everyday situational and natural contexts. Ales and colleagues (2020) found that measures of the Engagement and Cognitive Processing domain of the Rorschach Performance Rating System (R-PAS) were associated with eye tracking variables reflecting cognitive engagement and effort. Zigmunt Piotrowski (1937) introduced 10 signs in diagnosis of organic impairment, and other evidence of neuropsychological functions revealed by Rorschach assessment was noted in an historical review of the clinical literature (see C. Piotrowski, 2018).

The Human Movement (*M* responses), by Rorschach (1921), has been considered one of the best indicators regarding information about semantic representations. In fact, previous authors have suggested the utility of the Rorschach task in the diagnosis of brain lesions (Ebitz & Hayden, 2016). This is in line with Embodied Cognition theories which are focused on the role of motor cortex in semantic

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representations. According to these theories, words gain at least a part of their connotative meaning through specific perceptive, emotional, and motor representations, and memory recovery requires neural re-enactment of these sensory-motor traces (Desai et al., 2013).

Giromini and colleagues (2019b) suggested that the Rorschach human movement (*M*) response could be associated with an embodied simulation mechanism mediated by the mirror neuron system (MNS). Since the Rorschach percepts are a static stimulus, any apparent movement would reflect an imaginative process and specifically, during the movement response, the activation of motor system regions during both recognition and action productions would be expected. Several studies have demonstrated the involvement of the sensory motor system in language and cognition (Gagnon et al., 2018; Gallese et al., 2018). The motor system, including the primary motor and premotor cortex, is thought to partially support action verb comprehension and production (Pulvermüller, 2005).Previous studies have indicated that semantic processing of action related to language is accompanied by an involvement of motor cortical areas, as shown by functional Magnetic Resonance Imaging (fMRI), electroencephalography (EEG), and motor evoked potentials induced by transcranial magnetic stimulation (TMS; Aziz-Zadeh, 2008).

Neuroimaging studies have highlighted activation of the primary motor cortex and the pre-motor cortex for sentences describing actions (Aziz-Zadeh et al., 2008). This finding was also confirmed by the fMRI study of Desai and colleagues (2013) which showed that secondary motor cortex becomes activated when subjects deal on tasks with metaphors concerning actions. Functional imaging has shown that the primary motor and premotor cortex are activated when action verbs are presented as single words and, that generation of action words activates the premotor and supplementary motor area. The premotor cortex has been found to be involved in the processing of action semantics. In this regard, Balser and colleagues (2014) attribute this to the role of the premotor motor cortex in action planning, and some studies have identified the brain areas involved in planning and performing body movements. Based on the premise that the Rorschach *M* response may depend on an identification or embodied simulation mechanism, research has suggested that attributing human movement to ambiguous visual stimuli would associate with a mirroring activity (Giromini et al., 2019). Moreover, recent advances in neuroimaging could offer a unique opportunity on the interpretation of Rorschach test responses. For example, some research findings suggest that individuals with anorexia nervosa and body dysmorphic disorder tend to show abnormalities in visual processing on testing and in the front striatal systems (Feusner et al., 2010; Giromini et al., 2017). As another example, an interesting pattern of brain activations in the middle temporal (MT) area and inferior convexity of the prefrontal cortex has been observed when schizophrenia patients were exposed to a series of visual motion processing tasks at Rorschach. However, despite the extensive body of literature on Rorschach research, there are few Rorschach studies involving neuroimaging data. In the light of this, the aim of the current study is to explore the utility of the Rorschach task and its potential application in the clinical neurosciences.

Method:

Data for this systematic review were collected in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) (Page et al., 2021). The PRISMA consists of a checklist intended to facilitate preparation and reporting review/meta-analysis studies by identifying, selecting, and critically appraising relevant research, and collecting and analyzing data from the studies that are included in the review (see Table 1).

Table 1. PRISMA 2021 flow diagram for new systematic reviews which included searches of databases.

Identification of studies via databases and registers	Screening	Included
Records identified n = 51	Records removed *before screening*: Duplicate records removed (n =10) Records removed for other reasons (n =25)	Studies included in review: n = 11
	Reports excluded: 35 Reason 1: for the irrelevance to the topic in question. Reason 2: review articles, editorial comments, and case reports/series.	

2.1 Eligibility criteria:

Articles were included in the review according to the following criteria: English language, publication in peer reviewed journals, quantitative information (research data results) on the Rorschach in neuroscience field, and year of publication since the 2015. Articles were excluded by title, abstract, or full text for the processes connected to this topic, and for irrelevance to the topic in question. Further exclusion criteria were review articles, editorial comments, and case reports/series. In order to depict a contemporary perspective, this review focused on research since 2015 regarding the Rorschach task and its application in the neuroscience field.

2.2 Search strategy and study selection:

A comprehensive literature search was conducted in the *PubMed* and *Google Scholar* databases, and the initial search conducted used the keywords: "*Neuroscience*" AND "*Rorschach Task*". The research output listed 51 citations; no additional studies, meeting the inclusion criteria, were identified by checking the reference list of the selected articles. Of these, 40 studies were excluded according to inclusion and exclusion criteria. After the screening, a total of 11 studies reported on the neurocognitive aspects of the Rorschach. Articles were selected based on the title and abstract; then the entire article was read to determine whether the title/abstract was related to the specific issue of the Rorschach task in neurosciences and if the article potentially met the inclusion criteria. The cited reference lists of the selected articles were also examined in order to identify additional studies meeting the inclusion criteria. Details of this analysis are reported on Table 2 and Table 3.

Table 2: List of search terms entered into the PubMed, and Google Scholar search engines for identification the studies for this systematic review.

Number	Search term
1	Neuroscience [all fields]
2	Rorschach Task [all fields]
3	1 AND 2
4	English [Language]
5	2015/01/01 to 2021/07/01 [publication date]

Table 3: Characteristic of the studies included in the review

Author(s)	Study Aim	Sample	Clinical Tools	Key Findings
Ales et al. (2020)	This study investigated whether complexity and the other related Rorschach Performance Assessment System (R-PAS) variables in the engagement and cognitive processing.	A nonclinical sample of 71 adult volunteers.	Rorschach task Eye Link 1000 Plus Desktop Mount tracker	This research studied whether the complexity and other related, R-PAS variables would associate with increased engagement and cognitive effort while visually scanning the Rorschach inkblots, as measured by a number of eye-tracking variables.
Andò et al. (2015)	This study tested this hypothesis that the exposure to certain visual stimuli would automatically trigger action simulation in the mind of the observer.	36 participants	Repetitive transcranial magnetic stimulation (rTMS) The Rorschach task	These findings may be interpreted as being consistent with the hypothesis that there is a link between the MNS and the "feeling of movement" people may experience, when observing ambiguous stimuli such as the Rorschach cards
Andò et al. (2018)	The authors studied the effects of repetitive transcranical magnetic stimulation (rTMS) on attribution of movement to ambiguous stimuli and EEG mu suppression.		Repetitive transcranial magnetic stimulation (rTMS) Rorschach inkblots	This study showed the association between M and higher-level cognitive functioning.
Cristofanelli et al. (2016)	The aim of this study was to analyses to explore the brain's functional architecture in relation to psychological constructs of Rorschach variables related to perceptual styles and personality traits.		Functional Magnetic Resonance Imaging (fMRI) Rorschach task	This study showed that is possible studied with Rorschach protocol personality traits and cognitive functions.

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Doležal et al. (2015)	Studied the eye movements and neurological problems.	384 participants	Rorschach test	The eye tracking can be used for screening in preschool age even with children who cannot yet read by easier tasks.
Giromini et al. (2017)	In this study the authors studied the Neural activity during production of Rorschach responses.	26 healthy volunteers	Rorschach Test Functional Magnetic Resonance Imaging (fMRI)	These findings are in line with the traditional conceptualization of the test, as they suggest that taking the Rorschach involves (a) high level visual processing, (b) top-down as well as bottom-up attentional processes, and (c) perception and processing of emotions and emotional memories.
Giromini et al. (2019)	The aim of this study was to study the human Movement Responses to the Rorschach and Mirroring Activity.	26 healthy adult volunteers.	The Rorschach was administered during fMRI	The Rorschach test is most important in clinical practice for to improve the knowledge of patient's personality, and mirror neurons.
Giromini et al. (2021)	The authors studied the Human Movement Responses to the Rorschach and Mirroring Activity.	26 healthy adult volunteers	The Rorschach test Electroencephalogram (EEG) Repetitive transcranial magnetic stimulation (rTMS) Functional Magnetic Resonance Imaging (fMRI)	The Rorschach human movement (M) response could be associated with an embodied simulation mechanism mediated by the mirror neuron system.
Palmieri et al. (2019)	The authors studied suicidal ideation with Rorschach assessment.	21 participants	Rorschach test Beck Depression Inventory	Clinical settings should consider Rorschach as one of eligible tools of investigation on

				this field.
Porcelli et al. (2013)	Studied the Movement in the Rorschach Human Movement Responses.	21 participants	Rorschach inkblots	The Rorschach human movement (M) response could be associated with an embodied simulation mechanism.
Vitolo et al. (2021)	The goal of the current study was to test the robustness and validity of those eye-tracking findings by inspecting fMRI data.	26 healthy participants	Rorschach inkblots Functional Magnetic Resonance Imaging (fMRI)	The authors hypothesized that the greater the level of engagement and cognitive effort put in place by a Rorschach test-taker, the greater the engagement of his/her cortical areas reflecting ongoing top-down attentional processes should be.

Results:

The results highlighted research findings confirming that sentences that referred to action and movement activated the region of the motor cortex controlling movement. This is in line with the Embodied Simulation Theory which illustrates the crucial role of the motor system in the semantic representation of action. Ales et al. (2020) investigated complexity and the other related Rorschach Performance Assessment System (R-PAS) variables in engagement and cognitive processing and showed that these variables would associate with increased engagement and cognitive effort while visually scanning the Rorschach inkblots. Andò et al. (2015) studied the exposure to certain visual stimuli that would automatically trigger action simulation in the mind of the observer, and this revealed a link between the MNS and feeling of movement in a person when observing ambiguous stimuli, such as the Rorschach task. In another study, Andò et al. (2018) revealed the effects of repetitive transcranial magnetic stimulation (rTMS) on attribution of movement to ambiguous stimuli. Cristofanelli and colleagues (2016) analyzed the brain's functional architecture in relation to psychological variables related to perceptual styles and personality traits. Doležal et al. (2015) studied the eye movements and neurological problems on the Rorschach task. Giromini et al. (2017) studied neural activity during production of Rorschach responses and suggested that on the Rorschach task, high level visual processing is implicated, such as top-down and bottom-up attentional processes, and perceptual and emotional memories. Giromini et al. (2019b) studied the Human Movement responses on mirroring activity. The Human Movement responses are central in other studies: Giromini et al. (2021) showed that the Rorschach human movement (*M*) could be associated with embodied simulation mechanism mediated by the MNS; Porcelli et al. (2013) studied the 'Feeling' of movement in the Rorschach Human Movement responses; Vitolo et al. (2020) tested the validity of eye-tracking findings using fMRI data, and hypothesized the greater the level of engagement and cognitive effort put in place by a person in a Rorschach task; finally, Palmieri et al. (2019) analyzed the *M* responses on the level of suicidal ideation in survivors.

Discussion:

The scientific literature on brain mechanisms evoked by responses to the Rorschach task is rather limited. However, some research shows that Rorschach stimuli is associated to sensorimotor cortex processes (e.g., Giromini et al., 2019). Giromini and colleagues (2019a), in an attempt to fill this gap in the literature, administered 10 Rorschach inkblot stimuli to 26 healthy volunteers during fMRI. The results revealed that watching the inkblots activated temporo-occipital and frontoparietal areas, with greater activity in some small sub cortical regions in the limbic system. These results are in line with the traditional conceptualization of the test, as the results suggest that responding to Rorschach stimuli involves high-level perceptual processing and processing of emotions and emotional memories.

This is in line with the Theories of Embodied Cognition, pointing to the crucial role of the motor system in the semantic representation of action, where it is possible to postulate a deficit in information processing in cognitive impairments, such as patients with dementia. These theories propose that motor experience is integral to the representation of semantic actions. In other studies, the suppression of the 8 Hz to 13 Hz, over the somatosensory cortex, reflect mirroring activity in the brain associated with the MNS (Fox & Blatt, 1969).The Rorschach *M* response has been associated with an embodied simulation mechanism, i.e., in a setting when people were exposed to ambiguous stimuli, the observer would also need to experience a feeling of movement within his/her body (Andò et al., 2015). Giromini and colleagues (2010) studied 15 participants with the Rorschach test, as an index of mirroring activity in the brain, and hypothesized that identification of human movement would associate an increased EEG. Andò et al. (2015) in a rTMS study, supported the link between *M* responses, embodied simulation and mirroring activity, and in 36 nonclinical adults, half of the participants were stimulated over the left inferior frontal gyrus (a putative MNS area), while the other half, were stimulated over the vertex (a control site). Recently, Giromini and colleagues (2022) investigated whether Rorschach test tables that elicit Movement responses could influence the excitability of the motor cortex and therefore increase motor evoked potentials (MEPs). These authors studied a sample of 15 women (control group), and a sample of 22 participants (patients) aged between 21 and 41 years; however, contrary to the authors' initial hypothesis, the results did not have a corresponding neurophysiological counterpart.

Conclusions:

Based on the scientific literature, cognitive process involved in producing an *M* response is presumed to involve identification or embodied simulation. This finding has important implications for cognitive neuroscience. The ambiguous Rorschach stimuli might reflect an embodied simulation mechanism. Capacity to understand emotions and sensations depends on embodied simulation, a functional mechanism through which actions, emotions, or sensations activate our internal representations of the body states that are associated with these social stimuli, as if we were engaged in a similar action or experiencing a similar emotion or sensation.

Lastly, the current review highlights the importance of the Rorschach task for the neuroscience field regarding cognitive impairment and cognitive markers in relation to patterns in organic disease. Moreover, this diagnostic viewpoint has clinical implications for psychological treatment and cognitive rehabilitation. Additionally, in order to trace impairment evolution during the disease process, the Rorschach method may provide an interdisciplinary assessment for patients and contribute to best practice for improvement of quality of life.

Limitations: Only articles in the English language were included in this review. Future research should include relevant studies published in other languages.

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Contemporary Approaches to Psychopathology Research and Assessment

Mark A. Blais

Contemporary models are beginning to change how we conceptualize, research, and assess psychopathology. These empirically derived models organize psychopathology into several interrelated dimensions that are continuous with dimensions of normal mental health and hierarchically arranged. While this model has yet to fully challenge the official DSM psychiatric nomenclature, this emerging system is having a significant impact on research across many important mental health disciplines. This paper offers a) a brief overview of the development, status, and potential advantages these emerging models may offer and b) some preliminary thoughts on how insights from the hierarchical dimensional models might be applied in clinical assessment. The paper's primary goal is to stimulate curiosity with the hope of motivating assessment psychologists to become more familiar with these contemporary models of psychopathology.

Introduction:

Since the early 1980s, psychopathology research and clinical assessment have been dominated by the nomenclature of the Diagnostic and Statistical Manual (DSM-III-R, APA 1980). The DSM defines mental disorders as categorical (discrete) entities with boundaries differentiating them from each other and normal states of mental health. The DSM system brought several benefits, including a common language for researchers and clinicians, improved reliability, and increased respect for the field. However, over time, significant problems with the categorical model became evident, including high comorbidity, within-disorder heterogeneity (patients with the same disorder having few common symptoms), and arbitrary diagnostic thresholds. The quantitative exploration of these problems resulted in the emergence of contemporary dimensional models of psychopathology. These contemporary models organize psychopathology into several distinct but interrelated dimensions that are continuous with normal states and hierarchically arranged.

In a seminal paper, Krueger (1999) demonstrated that 10 common mental disorders could be reorganized into two broad dimensions of psychopathology: Internalizing and Externalizing. Subsequent research involving a broader range of disorders (bipolar and psychotic conditions) found that three dimensions, Internalizing, Externalizing, and Reality-Impairing, captured the core features of psychopathology (Wright et al., 2013). This core three-dimensional model has been widely replicated across diverse samples, types of measurement (disorders, symptoms, test scales, and items), research methods (longitudinal and cross-sectional), and domains (genetics, neuroscience, epidemiology, and developmental psychology (Kotov et al., 2021). Furthermore, dimensional models are transdiagnostic in that they focus on the overarching structure of psychopathology rather than individual disorders or syndromes. Hence, the transdiagnostic dimensional approach allows for a more coherent, parsimonious, and multi-level analysis of clinical syndromes and personality traits (Kotov et al., 2018).

The Hierarchical Taxonomy of Psychopathology (HiTOP; Kotov et al., 2021) incorporates maladaptive personality traits and clinical disorders, making it the most comprehensive transdiagnostic system. HiTOP organizes psychopathology into a hierarchy with disorders, maladaptive traits, and symptom clusters at the lowest (narrowest) level. The next level comprises five broad dimensions: Internalizing, Externalizing Disinhibition, Externalizing Antagonism, Thought Disorder, and Detachment.

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At the apex is an overarching general factor of psychopathology called the *p*-factor.

The *p*-factor is the broadest dimension of psychopathology and one of the most intriguing features of hierarchical models (Smith et al., 2020). The *p*-factor captures the positive correlations (covariations) evidenced among nearly all psychiatric disorders and is thought to represent a vulnerability to developing any or all mental illnesses. In this manner, the *p*-factor is like Spearmen's (1904) general factor of mental ability (g). While most researchers view the *p*-factor as a substantive entity, some investigators have argued that it is best considered a statistical artifact (Watts et al., 2020). Whether artifact or latent trait, the *p*-factor has proven to be quite valuable in research studies and may have utility in clinical assessment.

The Alternative Model for Personality Disorders (AMPD), Section III of the *Diagnostic and Statistical Manual, Fifth Edition* (*DSM*-5; APA, 2013), is another emerging dimensional model. The AMPD organizes maladaptive personality traits into five broad domains: Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism. The HiTOP and AMPD models are highly similar, and research has shown that the two systems can be combined (Kotov et al., 2021). Having a single transdiagnostic system covering maladaptive personality traits and clinical disorders would ensure that both domains of psychopathology are consistently and systematically assessed (Widiger et al., 2019).

While these emerging models have received little attention in assessment journals (Piotrowski, 2019), Smith et al. (2020) argued that psychological assessment would benefit from translating transdiagnostic models, especially the *p*-factor, into clinical practice. Currently, the available options for clinicians are somewhat limited. Only the Minnesota Multiphasic Personality Inventory family of instruments, MMPI-3 and MMPI-2-RF (Sellbom et al., 2021), and the *SPECTRA*: Indices of Psychopathology (*SPECTRA:* Blais & Sinclair, 2018) contain scales and are organized in a manner compatible with these hierarchical transdiagnostic models. The HiTOP group is developing self-report and informant scales for their system (Simms et al., 2022), but these are not yet available.

While challenging, integrating the hierarchical model into clinical practice could enhance mental health assessment (Blais & Hopwood, 2016). For example, with adults, the *p*-factor (apex of the hierarchy) can be conceptualized as a single score capturing the patient's overall burden of psychopathology or total symptom load (in this regard, consider the Full-Scale IQ and its role in neurocognitive assessment.) This global score has been associated with illness chronicity, degree of functional impairment, and the potential for suboptimal or atypical treatment response (Smith et al., 2020). A valid *p*-factor measure would significantly enhance the prognostic utility of clinical assessment.

Scores from the broad mid-level dimensions (e.g., Internalizing, Externalizing, and Reality-Impairing) indicate the patient's primary area(s) of psychiatric vulnerability and degree of clinical complexity. If a patient's highest elevation is on the Internalizing dimension (emotional dysregulation) without other elevations, they are likely to report a broad range of mood and anxiety symptoms. Knowing the primary area of vulnerability provides a broad organizing focus for treatment (e.g., Internalizing: decreasing negative affect, Externalizing: regulating mood and behavior, and Reality Impairing: improving thought quality and control). If multiple dimensions are elevated, it signals heightened clinical complexity, the likelihood of multiple diagnoses, and the potential for excessive, potentially ineffective treatments. The DSM borderline personality disorder (BPD) provides an excellent example. BPD patients often accumulate an abundance of DSM diagnoses and frequently receive overly complicated treatments (Leichsenring et al., 2023). Viewed through the lens of the dimensional model, the potential for these unfortunate outcomes is understandable as the BPD diagnostic criteria span the core dimensions of psychopathology: Internalizing (affective lability), Externalizing (disinhibition), and Reality Impairing (paranoia ideation and brief psychotic reactions). Informed by a transdiagnostic profile, a treating clinician would be aware of these potential complications at the commencement of care. Furthermore, comparing elevations across dimensions can help prioritize interventions and guide the implementation of complex multi-modal treatments.

The lowest level of the hierarchy taps narrow clusters of symptoms, traits, and disorders. Information from this level would be familiar to clinicians as it is similar to that provided by traditional assessment inventories. Such clinical data represent the patient's current symptom profile and reflect the patient's subjective experience. This information is easy to share with patients or family members in feedback sessions and treaters. It also provides more specific treatment targets and, if desired, can be linked to familiar DSM categories.

Another advantage of the dimensional model is that critical thresholds, such as T-scores $\geq$ 70, are unnecessary. The broad mid-level dimensions and the *p*-factor are truly dimensional and provide information across the full range of the construct. Therefore, scores falling outside the normal range (T-scores < 45 and > 55) yield meaningful clinical information. Not having arbitrary cut scores encourages flexibility in clinical decision-making and establishing locally meaningful benchmarks. For example, using data from our assessment clinic, we have found that ***SPECTRA*** Global Psychopathology Index (*p*-factor) scores $\geq$ T of 64 are associated with greater life impairment, a more chronic course, and a less robust response to standard mental health care. In addition, using the full range of the scale ensures that "subthreshold" conditions, which, despite causing significant emotional distress, are often overlooked, receive clinical attention (Rivas-Vazquez et al., 2004).

In conclusion, there is no way of knowing whether dimensional models will ever seriously rival the DSM system or how effectively these models will translate to clinical practice. Still, I am excited by these developments and pleased that the field is finally moving beyond the standard DSM formulary. I encourage all assessment psychologists to become familiar with these emergent models of psychopathology and consider the possibility of integrating salient features of the transdiagnostic model into their clinical practice and thinking.

***Author notes*:**

Mark A. Blais receives royalties from the sale of the *SPECTRA*: Indices of Psychopathology and has served as a paid consultant for Psychological Assessment Resources, Inc.

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Measuring Perspective-Taking and Interpersonal Affect in TAT Stories to Assess Parentification

Sharon Rae Jenkins

Parentification is a construct that describes a child or adolescent who has prematurely taken on family tasks and roles that are usually reserved for parents. Family therapists are often concerned about the effects of parentification on children's development, especially when it limits the child's maturation into autonomous functioning. This paper illustrates the use of two scoring systems for thematic apperceptive techniques (TATs) to estimate the degree of concern that assessment psychologists should consider expressing when evaluating cases of possible parentification. Feffer's Interpersonal Decentering measures the maturity of perspective-taking between story characters. If a child character is using more mature perspective-taking with a parent than a parent character is using toward a child, this finding suggests parentification. Thomas' Affective Scale measures the valence of interpersonal affect in story relationships, applied here to parent-child relationships. Stories showing parentification in the context of positive affect might be developmentally appropriate; parentification stories with the strongest negative affect should raise clinical concerns.

Introduction:

The concept of *parentification* describes a family situation in which a child or adolescent has come to assume family roles or responsibilities that are more typically assigned to their parents (Boszormenyi-Nagy & Spark, 1973). Parentification is usually described as potentially harmful to children's development and well-being, for example in cases of chronic conflict between parents (Leon & Rudy, 2005). However, Walsh et al. (2006) and others have shown that it can have positive benefits for adolescents in immigrant families that are cohesive. When assessment psychologists are called upon to evaluate cases of possible parentification, young people might hesitate to disclose negative events or feelings about their families. In these cases, indirect approaches such as thematic apperceptive techniques (TATs) might be a useful part of a multi method assessment (Piotrowski, 2017).

The purpose of this paper is to demonstrate the use of two scoring systems for TATs to identify positive and negative aspects of parentification in stories. Feffer's Interpersonal Decentering (Feffer, 1959; Feffer, Leeper, Dobbs, Jenkins, & Perez, 2008) is a measure of perspective-taking maturity that synthesizes Piaget's (1972) cognitive developmental theory with the concept of internalization in object relations theory. Thomas' Affective Scale (Thomas, 2008; Thomas & Dudek, 1985) assesses the emotional quality of specific relationships in stories from strongly positive to strongly negative. Combining scores from these two systems can be used to evaluate the emotional valence of the client's use of mature perspective-taking in the context of particular social role relationships. This paper applies both systems jointly to parent-child relationships in TAT stories to assess the emotional impact of parentification on adolescents.

Interpersonal Decentering:

As infants become children and children mature into adolescents, their infantile egocentrism develops into theory of mind (ToM), and ToM becomes perspective-taking or role-taking, leading toward adults' interpersonal decentering and mentalizing. In Jean Piaget's (1972) theory of children's development of perspective-taking abilities, he called this idea "decentration". Can the child imagine how the world appears from another person's point of view? The theoretical background provided by Piaget and applied to

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social interaction by Feffer (1959) suggests that these mature forms of social cognition are essential skills for healthy adult relationships.

Beyond egocentrism, the more primitive form of interpersonal conservation in social interaction based on Piaget's theory of concrete operations is called "sequential decentering". This involves a series of alternating stimulus – response exchanges, such as talker-listener or leader-follower, in which each subject in turn acts as a stimulus to the other's response. Young children understand human interaction concretely, as a back-and-forth process of action and reaction. As they develop, children become able to imagine possibilities that they cannot see.

As children become adolescents, then adults, they are able to use abstract formal reasoning and simultaneous information processing. Then they can understand that other people have different thoughts, feelings, and intentions from themselves. This is a form of role-taking (taking on the other person's role) or mentalizing, a more mature theory of mind. This is the more advanced form of interpersonal decentering, known as "simultaneous decentering", which involves one person remembering or anticipating another person's actions while simultaneously considering their own actions. Interpersonal decentering involves one person anticipating another's ideas, thoughts, feelings, or actions and then modifying their own behavior in order to maintain a healthy relationship.

Melvin Feffer's (1959; Feffer et al., 2008) Interpersonal Decentering scoring system for thematic apperceptive techniques (TATs)is a simple measure of this complex idea, the development of children's theory of mind as shown in stories that children produce about pictures. In older children and adults, this idea is called perspective-taking, role-taking, or mentalizing. The Interpersonal Decentering system represents both the less mature, concrete ways that younger children think and the more mature abstract reasoning of adults, incorporating Piaget's ideas of sequential and simultaneous decentering into the nine ordinal content analysis categories of the system. Egocentric undifferentiation of characters receives the lowest score (1). Action-reaction statements represent the more primitive sequential decentering, and are given lower scores (2-4) based on the acting character's failure to consider the other's behavior or internal state. This results in a stimulus-response style of communication. Anticipating or reflecting on another character's behavior requires internalization (mental representation), a construct from object relations theory. This simultaneous decentering is qualitatively more mature (scores 5-9) because it shows that the storyteller is able to think of interpersonal relationships in more abstract, differentiated, less egocentric terms. The ability to differentiate the characters while simultaneously maintaining a complex relationship among them shows mature decentering (Feffer, 1959)

For example, for the sequential levels, a score of 2 involves a non-reactive directional relationship (e.g. "He told her it was cold outside."). If the object character reacts to the subject character (e.g., "He told her it was cold outside, so she got her coat."), the interaction receives a score of 3. If this reaction in turn elicits a reaction from the original character (" . . . and he smiled"), it becomes an interactive directional relationship, increasing that unit's score to 4.

For the simultaneous levels, in level 5 the character is represented as the simple object of the main character's internal state, as in a cognitive process, memory or imagination (e.g. "She decided to tell her husband."). The object character in level 6 is elaborated by external attributes or behaviors, (e.g., "They remembered their parents walking together"). In level 7, the object character is elaborated by having his or her own internal state ("She thought he might be sad."). A score of 8 indicates that the main character is internalizing two other characters, in which one of them is the object of the internal state of the other (e.g., "He feels that she is mistaken in thinking that Anna would not go"). In the highest level of decentering (9), the object of the internal state is the self in an interactive relationship with another (e.g., "She feels glad that she was able to help them."). Cognitive processes at level 9 are needed to feel complex social emotions such as guilt or remorse.

Here is an example of a story about TAT Card 1 (boy with violin), showing how Decentering scores are given for each unit of interaction:

"The boy is frustrated in his efforts of playing the violin. He was practicing and can't quite get it right. [He has a musical family and he wants to be a part of them]. (6) At this time, he is feeling self-pity for not playing it right and [he wants his parents to be proud of him]. (7) Soon he will begin to practice again. The song may not be perfect but he will have tried his best."

This story shows the boy internalizing his family, who are elaborated as being "musical". He also internalizes "his parents" who have the internal state of being "proud of him".

Thomas' Affective Scale

The mental models of object relations theory can have an emotional quality that Piaget did not consider, and that does not affect scores for Interpersonal Decentering. Antoinette Thomas's Affective Scale for TAT stories (Thomas, 2008; Thomas & Dudek, 1985) identifies the relationship roles of the people in the story (parent/child, romantic couple, married spouses, etc.) and rates the emotional quality of each relationship on a simple four-point scale, +2 or +1 for positive, healthier relationships and -1 or -2 for negative, less healthy relationships. Although the boy in the example story is not happy ("frustrated"), the affect toward his family is strongly positive, earning a score of +2.

Combining these two approaches to adolescents' TAT stories gives a more balanced picture than either one alone because it places decentering mental processes within both social cognitive development and emotional, attachment-related development for specific personal relationship models. This paper applies these approaches to parent-child models to illustrate the assessment of parentification (Leon & Rudy, 2005; Walsh et al., 2006).

Application to Parentification Stories

I now compare stories about affectively negative situations from two adolescent cases to show contrasting patterns of scores and their implications for assessing parentification. In healthy development, the caring parent shows mature decentering toward the child. Adolescents whose stories show the child decentering the parent more maturely than the parent decenters the child may be taking responsibility for managing the parent-child relationship affect, making them at risk for parentification. Managing parental affect is not a constructive role for a child.

Here is an example of a story about TAT Card 1 showing a more affectively negative situation that scores-1 on the Affective Scale because of the father's pressure and unresponsiveness and the boy's resentment. It suggests parentification in the way that the boy takes responsibility for his father's happiness.

"[Jimmy has always been pressured by his musical father to take up an instrument and achieve the highest awards with it.] (3) At first, he thought it might be fun, but then began [resenting it because no matter how well he did or how much effort he put into it, he never seemed to please his father.] (4) Today, [he sits contemplating what he can do to achieve happiness for himself and his father.] (9) At times he feels like just giving up."

In this story, the scores of 3 and 4 represent back-and-forth actions: the father pressures the boy, the boy responds by taking up the instrument. Then, the boy makes an effort to please his father, who responds by not being pleased, so the boy responds back by trying again. When he internalizes his own potential actions toward his father, the score is 9. By examining the content of this interaction, we understand that the father's failure to respond with pleasure to his son's efforts leaves the boy feeling responsible for both of them together. In a healthier story, the boy might think about what he can do to make his father proud, which is age appropriate. However, the boy in this story takes on a much larger burden, too large to ask of a child, which makes it a good example of parentification. Although his demoralization produces a negative score, a score of -2 would require more punitive actions by the father

and stronger evidence of the boy's distancing from his paternal relationship; that he cares about pleasing his father suggests the overall relationship is positive.

The last parentified story is more pathological, showing an extreme negative Affective Scale score(-2) and a conflictual parent-child relationship:

"One night a little boy was playing his violin when his father came bursting in the little boy's room and [told him to stop playing because he was trying to get work done. The little boy stopped playing for a while] (3) and then [thought that if he played softer his dad wouldn't hear.] (9) No such luck. His father ran in there and with such force broke the violin. The father slammed it on the boy's desk and [said, "that's what you get."] (2) The rest of the night the poor boy stared at his violin (his voice) all night long."

In this extreme example, the irritable father silences his son's voice with his rage. The boy's effort to work out a compromise, which suggests parentification fails much more dramatically than in the story before. Given that failure, rather than focusing only on the evidence of parentification, such a story would normally lead to the examiner assessing the storyteller for possible diagnosis of post-traumatic stress disorder (PTSD) as well as exploring a possible history of family violence and developmental relational trauma (Schorr & Goldner, 2023).

Conclusion:

In conclusion, although family conflict might be related to negative consequences of children's parentification (Leon & Rudy, 2005; Schorr & Goldner, 2023), possible parentification should not be overlooked in less overtly conflictual situations such as the second story. Children and adolescents may be unwilling to admit to negative feelings or disclose harmful experiences with parents if interviewed or on self-report tests, but "fictional" stories for assessment may reveal their underlying tensions. However, if the child's or adolescent's parent-child stories show evidence of positive affect or only weak and transient negative affect, and there is evidence that the family climate also encourages age-appropriate autonomy (Walsh et al., 2006), signs of parentification in adolescents' stories might indicate readiness to assume adult family roles. In family therapy with cohesive families that encourage adolescents' independence and assumption of responsibility, what appears to be parentification should be evaluated in the context of its age appropriateness and parental support for the adolescent's growing autonomy (Walsh et al., 2006).

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Understanding Personality and Intellectual abilities of Children in Conflict with Law

Ashish Silswal & Masroor Jahan

A comparatively consistent pattern of behavior, thoughts, and actions that sets one individual apart from another is called personality, whereas the ability to think rationally, act purposefully, and deal effectively with the environment is called intelligence. The aim of the present study was to study the personality and intellectual abilities of children in conflict with the law accused of heinous crimes using an intellectual ability test and a projective technique in order to gain insight into the connections between the variety of crimes committed by them and their personal traits. The study used Alaxander Pass-Along Test and Thematic Apperception Test (TAT) to collect data. Five male children in conflict with law from Jharkhand who were accused of heinous crimes and were between the ages of 16 and 18 were selected for the study. The findings suggest that these children had borderline intellectual functioning, had a dominance of negative emotions, and struggled in adjustment and interpersonal relations.

Introduction:

According to India's Juvenile Justice Act, 2015, “juvenile” means a child below the age of eighteen years. He/she is a person who is below the age of criminal maturity, above the minimum age of criminal responsibility (which varies by country), and legally capable of committing a crime. According to the Act, "any person under the age of 18" should be regarded as a child, and seven years old should be the age of criminal responsibility (Agarwal, 2018). Juvenile delinquency is a commonly used term. A "delinquent" is someone who has been found guilty, whereas delinquency is when a minor engages in actions that are against the law. Juvenile delinquency, then, might be defined as when a child or young person commits a crime, engages in antisocial behavior, or exhibits behavior that is out of their parents' control.

Young people frequently take advantage of illegal opportunities by engaging in violent crimes, drug addiction, and other felonies. Since delinquent identity is always built as an alternative to the mainstream identity of the larger society, figuring out the variables that contribute to its growth and maintenance becomes a priority in the process of identifying the causes of criminal activity. These delinquent behaviours could be the consequence of the people's poor way of life, which includes inconsistent discipline, high levels of stress, and difficulty communicating. Social, cultural, and physical variables are the three categories into which the factors influencing adolescent criminality can be divided. The social, economic, and cultural circumstances that exist in a nation typically have an impact on the seriousness and intensity of juvenile offenses (Goldstein et al., 2013). It's possible that the detrimental effects of socioeconomic instability are what motivate young people to engage in delinquent behavior. In this situation, the influence of gangs and drug dealers, a lower social class, a distorted family structure, and a lack of education could all be social factors that lead children to commit crimes. Migration of people from one place to another for better livelihood is associated with experiencing differences in norms, values, and cultures. The degree of acceptability in a new culture differs from situation to situation. Thus, the migrants may turn to criminal activity as a way to deal with these difficulties and try to raise their level of living.

Furthermore, the media's role of showing violent and aggressive content and promoting the "cult of heroes," which upholds justice by physically eliminating adversaries, provides even another justification for engaging in delinquent behavior (Anderson et al., 2003). The impact of peers is a further crucial

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component. Young individuals are particularly at risk throughout their early adolescence and are frequently pressured by their peers to adopt beliefs, customs, and ways of acting. Adoption of a behavioural code based on their experiences in society, high levels of cohesion, and hierarchical organization are characteristics of juvenile organizations. Membership in these groups might be a necessary socializing need. In this paper, the term 'Children in Conflict with Law' will be used instead of 'Juvenile Delinquents.'

Personality is defined as a relatively stable pattern of behavior, thoughts, and actions that sets one individual apart from another. A person's behavior is significantly influenced by the traits that comprise their personality. Some traits can be associated with violence and crime. Biological factors like low heart rate, as well as individual characteristics like high impulsiveness and low intelligence, as well as family dynamics, contribute to the likelihood of violent behavior in children in conflict with law (Farrington, 1998). Other factors include peer delinquency, socioeconomic status, low socioeconomic status, urban residence, living in high-crime neighbourhoods, immediate situational influences, including motives like anger orthe desire to hurt, and the escalation of trivial altercations (Farrington, 1998). It has also been found that traits like neuroticism, extraversion, agreeableness, openness, and conscientiousness are related toviolence. Extraversion, neuroticism, and violence involvement are found to be positively correlated, while agreeableness, openness, and consciousness have a negative correlation with violence (Mohamedamin & Fatahi, 2022). Various other traits, such as self-assertiveness, defiance, extraversion, narcissism, suspicion, hostility, egoism, self-centeredness, spitefulness, jealousy, and indifference to or lack of empathy for others, are also linked to aggression and violence (Glueck & Glueck, 1950; Cleckley, 1951). Numerous conduct issues in forensic, mental health, and community living have been linked to children indulging in criminal activities (Salekin & Frick, 2005). The causes of these tendencies may include upsetting experiences or circumstances that evoke intensely unpleasant feelings, which make adolescents frequently feel worried, stressed, and agitated when they come across challenging social circumstances. Research has also shown that young people who commit crimes are also likely to be impulsive, paranoid, angry, aggressive, hostile, and quick to act in response to perceived threats (White et al., 1994). Additionally, research indicates that narcissistic personality traits, which include an extravagant feeling of self-importance, a sense of superiority, and a lack of empathy, have been linked to children who have conduct issues or are indulged in conflict with the law (Barry et al., 2003). Machiavellianism is another personality trait that defines a person as being centred on their own interests. This feature has been connected to children in conflict with the law since it has been observed that those who possess it would manipulate, deceive, and exploit others to accomplish their goals (Hadjar et al., 2007). Thus, Machiavellianism, narcissism, and psychopathy have been referred to as the "dark triad" of personality traits that contribute to indulgence of children in criminal activity (Williams & Paulhus, 2004).

Profiling of Children in conflict with law:

To identify trends and causes of crime, profiles of young offenders who are arrested and convicted are created. This is predicated on the knowledge that the information will be useful in identifying criminals and preventing future crimes. Both qualitative and quantitative methods are employed for the profiling. Questionnaires and checklists are examples of quantitative methods used to determine the traits of young offenders. Projective procedures are one type of qualitative technique that may be useful in assessing and comprehending an individual's unconscious thinking.

Research studies on children in conflict with the law are limited. The present study was conducted to know more about the intellectual ability and personality characteristics of children in conflict with the law.

Method:

Participants

A cross-sectional qualitative study was conducted, and the sample consisted of five male children in conflict with the law. These children in conflict with the law were alleged to have committed heinous crimes and were sent to Ranchi Institute of Neuropsychiatry and Allied Sciences (RINPAS) by the Juvenile Justice Board for psychological evaluation. The age of these children ranged between 16 and 18. Purposive sampling was done to select the participants for the study. Only those children were selected who could communicate in Hindi/English and were willing to participate in the study. Children having mental illness, epilepsy, or significant medical illness were excluded.

Measures

Socio-demographic and other relevant details were recorded in a proforma. Alexander Pass-Along Test was used to assess the intellectual functioning of the participants. In the year 1937, William Picken Alexander developed the Alexander Pass-along Test at the University of Edinburgh. It is a performance test that is used to gauge the IQ of people between the ages of 7 and 20.

The Thematic Apperception Test, or TAT, was used to assess personality components. Often referred to as the "picture interpretation technique," it was developed in the 1930s at Harvard University by American psychologists Christina D. Morgan and Henry A. Murray. TAT is one of the most extensively studied and applied personality assessments in clinical settings in India. Card 1, Card 3BM, Card 8BM, Card 13MF, Card 15, and Card 18BM of the Indian Adaptation of the original cards done by Dr. L. P. Mehrotra were selected considering objectives of the study.

Procedure

Children referred to Ranchi Institute of Neuropsychiatry and Allied Sciences (RINPAS) by the Juvenile Justice Board for psychological evaluation were screened. Participants were selected based on inclusion and exclusion criteria. Mental Status Examination of these children was done to rule out any mental illness in them. After that, their intellectual ability was assessed using Alexander Pass-Along Test and personality was analysed using Thematic Apperception Test (TAT). Collected data was analysed qualitatively.

Results:

A case-by-case analysis of the intellectual functioning and personality profiles based on the interpretation of Alexander Pass-Along test and TAT protocols is given below.

Case 1.

Mr. A was a 16-years old male, Hindu, Hindi speaking, educated up to 9th standard, residing in a rural area and belonging to lower socio-economic status family. Mr. A was kempt and tidy at the time of the interview and looked appropriate to the stated age. Initially Mr. A was guarded but with some effort, some degree of rapport was established. His psychomotor activity was within normal range. No active psychotic symptom was present. Mr. A was accused of committing homicide.

On Alexander Pass-Along Test Mr. A obtained an IQ of 82, indicating borderline level of intellectual functioning.

Stories written by Mr. A were structured, real and appropriate, but most of the stories were incomplete. The organisation of the stories was adequate but not good. The length of the stories was short indicating inhibition or guardedness. The language used was grammatically correct and no peculiarities in

the language were observed. Mr. A was able to incorporate the major and central dominant parts of the picture indicating that he can deal with routine aspects of the environment and is sufficiently alive to the demands of the reality.

Analysis of the stories suggested that Mr. A has below average intellectual functioning. The stories were not all complete and the organisation was not very good. The stories also revealed that Mr. A lacks emotional maturity. His personal adjustment was unsatisfactory as there was dominance of negative emotions in his stories. Social adjustment was also poor, as most of the stories depicted conflicts between different characters of the stories. The major theme that was highlighted in the stories was relationship problems and aggression. The environment was perceived as hostile and threatening and was a source of anxiety. The dominant needs were the needs for affiliation, and succourance which can be corroborated complaints of Mr. A. During history taking, Mr. A had stated that he lacked support from family and friends and people generally did not like him. Significant conflict was affiliation vs rejection where the individual wanted to have a close relationship with others, but as the environment and others were perceived as hostile, they reject him. The major defences used by the client were denial and projection. Since the needs of Mr. A were not fulfilled, and the environment was not supportive of fulfilling the needs, it resulted in anger and aggression.

Case 2.

Mr. B was a 17-years old male, Hindu, Hindi speaking, educated up to 9th standard, residing in a semi-urban area and belonging to lower socio-economic status family. His parents neglected their children and did not provide them with love and affection as they were too busy in earning their means of livelihood. Mr. B was kempt and tidy at the time of the interview and looked appropriate to the stated age. Initially Mr. B was guarded. Rapport was established with some difficulty. His psychomotor activity was within normal range. No active psychotic symptom was present. Mr. B was accused of committing sexual assault and rape.

On Alexander Pass-Along Test Mr. A obtained an IQ of 90, indicating average level of intellectual functioning.

Stories written by Mr. B were structured, real and appropriate but most of the stories were incomplete. The organisation of the stories was appropriate. The length of the stories was short indicating inhibition or guardedness. The language used was grammatically correct and no peculiarities in the language were observed. Mr. B was able to incorporate the major and central dominant parts of the picture indicating that he could deal with routine aspects of the environment and was sufficiently alive to the demands of reality.

Analysis of the stories suggested that Mr. B had an average level of intellectual functioning. The stories were not all complete, but the organisation was adequate. The stories also revealed that Mr. B lacked emotional maturity. His personal adjustment was unsatisfactory, as most of the stories were filled with negative emotions. Social adjustment was also poor, as most of the stories depicted conflicts between different characters of the stories. The major theme that was highlighted in the stories was poor interpersonal relations, loneliness and aggression. The environment was perceived as hostile and rejecting the needs of the individual. The major needs that were highlighted in the stories were the needs of affiliation and succourance as well as the need for acquisition. This can be corroborated by the personal life of Mr. B, who had a broken family where the parents were unloving and neglected their children. Mr. B's romantic advances were rejected by his love interest, who later accused him of sexually assaulting and raping her. Significant conflict was affiliation vs rejection where the individual wanted love and affection but was neglected and rejected. This further leads to the conflict of id vs super ego, and due to fragile ego the individual tends to grasp or snatch whatever he desires. The major defences used by the Mr. B were denial and rationalisation. These factors might have contributed to the accused's actions.

Case 3.

Mr. C was a 17-years old male, Muslim, Hindi speaking, educated up to 9th standard, residing in a semi-urban area and belonging to middle socio-economic status family. Mr. C was kempt and tidy at the time of the interview and looked appropriate to the stated age. Initially Mr. C was guarded but with some effort, some degree of rapport was established. His psychomotor activity was slightly retarded. No active psychotic symptom was present. Mr. C was accused of homicide.

On Alexander Pass-Along Test Mr. A obtained an IQ of 85, indicating borderline level of intellectual functioning.

Stories written by Mr. C were structured, real and appropriate, but most of the stories were incomplete. The organisation of the stories was adequate but not good. The length of the stories was short indicating inhibition or guardedness. The language used was grammatically correct and no peculiarities in the language were observed. Mr. A was able to incorporate the major and central dominant parts of the picture, indicating that he could deal with routine aspects of the environment and was sufficiently alive to the demands of reality.

Analysis of the stories suggested that Mr. C had below average level of intellectual abilities. The stories were not all complete and the organisation was not good. The stories also revealed that Mr. C lacked emotional maturity. His personal adjustment was unsatisfactory as there was a dominance of negative emotions in his stories. Social adjustment was also poor, as the characters in the stories did not have harmonious relations. Major themes that were highlighted in the stories was of helplessness and of one being stuck in stressful situations as well as latent aggression. This can be corroborated by the low mood of Mr. C and his side of the argument that he was wrongfully accused of a crime that he did not commit. The environment is perceived to be confining, demanding, and exploiting because of peer pressure. Major needs highlighted in the stories were the needs of affiliation, succourance and harm-avoidance. Stories also depicted the need of autonomy that seems to be in conflict with the needs of affiliation and succourance. This was depicted in his approach-avoidance conflict with his peer group, where he wanted to be a part of the group, somewhere knowing that the peer group was not right and exploitative of him. The major defences used by Mr. C were denial, rationalisation and reaction formation. These conflicts may have given rise to helplessness and latent aggression in the individual.

Case 4.

Mr. D was a 17-years old male, Hindu, Hindi speaking, educated up to 5th standard, residing in a rural area and belonging to lower socio-economic status family. Mr. D also abused alcohol and ganja but did not fulfil the criteria for dependence. Mr. D was kempt and tidy at the time of the interview and looked appropriate to the stated age. Initially Mr. D remained guarded throughout the interview. He remained evasive to the questions related to his personal life. His psychomotor activity was within normal range. No active psychotic symptom was present. Mr. D was accused of armed robbery and homicide.

On Alexander Pass-Along Test Mr. A obtained an IQ of 85, indicating borderline level of intellectual functioning.

Stories written by Mr. D were structured, real and appropriate but most of the stories were incomplete. The organisation of the stories was adequate but not good. The length of the stories was short indicating inhibition or guardedness. The language used was grammatically correct and no peculiarities in the language were observed. The fact that Mr. D was able to incorporate the main and dominant elements of the picture, which showed that he was capable of handling everyday situations and was adequately aware of the demands of reality.

Analysis of the stories suggested that the client's intellectual functioning was below average. The organization was inadequate and not all the stories were complete. Additionally, stories demonstrate Mr. D's immaturity. His stories were dominated by unpleasant emotions, which made his personal adjustment unsatisfying. Most of the stories featured disputes between the various characters, suggesting that social adjustment can also be considered unsatisfactory. Major themes highlighted in the stories were of anger, offensiveness and aggression. Dominant needs that emerged from the stories were the needs for affiliation and succourance where the individual wanted to be loved and cared for on one hand, and on the other hand, there was also need for dominance and aggression where the individual wanted to control one's environment and overcome any opposition forcefully. These two groups of needs stand in conflict with one another. Mr. D mostly employed denial, projection, rationalization, and reaction formation as defences to prevent his ego from collapsing.

Case 5.

Mr. E was a 17-years old male, Hindu, Hindi speaking, educated up to 8th standard, residing in a rural area and belonging to lower socio-economic status family. Mr. E's family environment was not cordial. He lost his mother when he was young. After the death of his mother, his father re-married and two more sons were born to him. His father was neglectful of Mr. E and never provided him with love and affection. His stepmother only loved and cared for her own sons and disliked Mr. E. His stepbrothers also did not like Mr E and treated him inappropriately. Mr. E was kempt and tidy at the time of the interview and looked appropriate to the stated age. Initially Mr. E was guarded but with some effort, some degree of rapport was established. His psychomotor activity was within normal range. No active psychotic symptom was present. Mr. E was accused of sexual assault and rape.

On Alexander Pass-Along Test Mr. A obtained an IQ of 82, indicating borderline level of intellectual functioning.

Although Mr. E's stories were structured, real and appropriate, some of them were incomplete. The organisation of the stories was adequate but not good. The stories' brief length suggested restraint or guardedness. No language peculiarities were noticed, and the language employed was grammatically correct. Mr. E was able to incorporate the major and central dominant parts of the picture indicating that he could deal with routine aspects of the environment and was sufficiently alive to the demands of reality.

Analysis of the stories suggested that Mr. E has below average intellectual functioning. The stories were not all complete and the organisation was not very good. The stories also revealed that Mr. E lacked emotional maturity. His personal adjustment was unsatisfactory as there was dominance of negative emotions such as anger, guilt, self-hatred and inferiority in his stories. Social adjustment was also poor as the characters in the stories did not have harmonious relations. The major themes highlighted in the stories was of aggression, guilt and loneliness. The stories narrated by him had an element of aggression followed by guilt. However, the aggressive act moves him away from others, leading to loneliness. The environment was perceived as rejecting. The major needs that were highlighted in the stories were the needs of affiliation and succourance. This can also be corroborated by the personal life and home environment of Mr. E. He never got care and affection from his father. His mother passed away when he was young. His stepmother and stepbrothers treated him inappropriately. The need for achievement was also present to a marked degree which was in direct conflict with his feeling of inadequacy.

Discussion:

On analysing all five cases collectively, it was observed that four out of the five cases belonged to lower socio-economic status. Research has indicated a potential direct correlation between youth criminality and familial socioeconomic status. In a study conducted by Rekker et al. (2015), it was found that young people were more likely to commit crimes when their parents' socioeconomic status was lower

than when it was greater. Agnew et al. (2008) argued that children indulging in criminal behavior is caused by economic issues linked to SES rather than by lower SES itself. These issues include significant lifestyle adjustments brought on by financial constraints and the inability to pay for necessities.

It can also be seen that four out of five cases had borderline level of intellectual abilities as assessed by Alexander Pass-Along test. Below average intellectual ability can also be inferred by looking at the quality and organisation of the stories. Despite clear instructions and willingness to write stories, most of the stories created by these children in conflict with law were incomplete and were missing some or the other important components that had to be included in the story. Previous research also suggests that the intellectual functioning of children in conflict with law is usually below average than children who are not involved in any criminal activity (Abdou et al., 2012; Elmund et al., 2007; Koolhof et al., 2007; Lansing et al., 2013; Miyaguchi & Shirataki, 2014). It is suggested that children with low IQs may be more prone to criminal or antisocial behavior since their limited linguistic skills make it harder for them to receive rewards in school as well as from the environment (Moffitt et al., 1981).

Most of the stories narrated by the participants had short length. This indicated inhibition and guardedness. As was stated earlier, the participants of the study had been sent by the juvenile justice board for psychological evaluation. They knew that after their assessment, a report would be sent to the Juvenile Justice Board which might have an impact on their legal proceedings. This puts them on guard, and it can be seen in the quality of their stories. It is to be noted that some degree of guardedness persisted even after attempts to build a good rapport.

Analysis of the stories revealed that the personal and social adjustment of these children was unsatisfactory and poor. This can be inferred from the dominance of negative emotions and the presence of conflicts between different characters in the stories. The major negative emotions seen were anger and dejection. Guilt was also observed in one case. In a Spanish study it was found that when compared to normal children, at-risk children and young offenders displayed higher levels of personal and familial maladjustment, and youth offenders also displayed higher levels of social maladjustment. Additionally, children in conflict with law demonstrated less social adjustment in terms of consideration for others than normalized youth, and at-risk minors and offenders demonstrated more social maladjustment, including more social withdrawal, social anxiety/shyness, and leadership. Compared to normalized youth, at-risk minors and young offenders reported higher levels of psychological maladjustment, including obsessive-compulsive symptoms, interpersonal sensitivity, depression, hostility, anxiety-phobia, and psychosis. They also reported higher levels of somatic symptoms, generalized anxiety, and paranoid symptoms (Mayorga-Sierra et al., 2020).

Major themes highlighted in the stories were poor interpersonal relationships, aggression and loneliness. None of the participants had good interpersonal relationships. Relationship problems can be seen regarding their family as well as among peers. This can be due to lack of emotional maturity and social skills that are said to be low in children in conflict with law. There are various studies that support the claim that children in conflict with law have lower emotional intelligence than the children who are not involved in any criminal activity (Wang, 2002; Chong et al., 2015; Milojević et al., 2016). Research over the past few decades has consistently connected a lack of social skills with children indulging in lawbreaking and reoffending, and it has been linked to other problems in several areas of life (Dishion et al. 1984; Freedman et al. 1978; Gaffney & McFall 1981; Larson et al. 2007). Aggression and latent aggression can be seen in the stories in the form of aggressive content, aggressive intent or aggressive acts that characters in the story either face or commit. This aggression is seen to lead to negative feelings of anger and sometimes dejection. Some researchers have also found that children in conflict with law are high on aggression (Shahzad & Yasmin, 2015) especially reactive aggression (Sharma & Kirmani, 2016). This aggression can again be explained because of poor social skills, as these children do not know how to effectively communicate their needs and wants. The theme of loneliness can be explained on two grounds. First, as

most of the young offenders in the study had poor social skills, interpersonal problems and lack of support from family and peers, they are likely to feel lonely. Apart from this, these children in conflict with law were detained in observation homes as they had been accused of committing heinous crimes. It is very evident that they will feel lonely as they are cut off from their families and social groups and must live with a group of strangers. All the participants in the study generally mentioned the environment as hostile and not fulfilling the needs of the individual. This might be because most individuals had uncongenial environments as children, such as family discord, financial difficulties, and unsupportive others and lack of positive role models.

Major needs to be highlighted in the study were the needs of affiliation and succourance. These needs seem to arise from the lack of love and care that the participants in the study received from their families. These needs appear to be a result of the study participant's family not showing them enough love, care, or emotional support. The emotional and psychological requirements of many of these children were not sufficiently satisfied throughout their upbringing. A sense of rejection brought on by a lack of love and care from family increases the possibility that a person will go to peers to feel supported, accepted, and united. This need is sometimes fulfilled by gangs and antisocial peers. Maladaptive behaviours are reinforced by these antisocial peers. Additionally, young people may learn to justify illegal behavior, get desensitized to violence, and gain opportunities to commit crimes (Phillips, 2021).

Conclusion:

The findings of the present study suggest that most of the children in conflict with law has borderline level of intellectual functioning. They have dominance of negative emotions and poor personal and social adjustment, which reflects in poor interpersonal relations. They are high on aggression and loneliness and also have a high need for affiliation, which puts them at a risk for affiliating with antisocial peers and indulge in illegal behavior, get desensitized to violence, and gain opportunities to commit crimes.

Since it was a qualitative study, sample size was small. Only male children in conflict with law were included, which restricts the generalisation of findings. Further studies on larger sample size including other relevant variables are required in this field.

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A Case of Spiritual Inclination: Exploring the Underlying Psychodynamics

Vijay Pathak, Deepali Batra & Bankey L. Dubey

Spirituality has become an increasingly important aspect of young people's lives. While it can offer profound meaning and a sense of belonging, it can also be met with resistance from family and society, particularly in cultures that prioritize traditional paths of success. This case study explores the complex interplay between a young man's (Mr. JL) inclination towards spirituality and his underlying psychological state. He is a 25-year-old Hindu male, presented with a desire to join an ashram. His family, however, expressed concerns about his career prospects and social life. Psychological assessments revealed unresolved emotional needs stemming from a perceived lack of parental affection, leading to social anxiety, dependency issues, and internal conflict. This case study highlights the complex factors that can influence a young person's spiritual journey. Family values, educational programs, peer groups, and exposure to spiritual content can all play a role. Additionally, traumatic experiences, life changes, and a desire for inner peace can lead individuals to seek spiritual answers. JL's case exemplifies this. His spiritual pursuit might be a coping mechanism for the underlying psychological issues. Understanding the motivations behind spiritual inclinations is crucial. Therapists can use various techniques to address unresolved emotional needs, manage interpersonal conflicts, and integrate spirituality in a healthy and balanced way. This case study contributes to a deeper understanding of the complex factors that shape a young person's spiritual path. It highlights the need for a nuanced approach that considers both the individual's psychological state and the cultural context.

Introduction:

Choosing a spiritual path as a primary way of life often raises concerns among family members, even in a deeply spiritual country like India. Parents typically believe that individuals should prioritize social, financial, and academic achievements. This presents a sublime paradox: while spirituality may offer profound meaning and a sense of belonging, it is often perceived as a divergence from the conventional path of worldly success. This tension highlights the complex interplay between cultural heritage and modern aspirations, where the quest for inner peace both aligns with and challenges societal expectations.

Many factors contribute to a young person's decision to explore spirituality. As per Scales et al (2016), growing up in a family or community that values spirituality can play a significant role in shaping a young person's spiritual journey. Also, schools and educational programs that incorporate spiritual or philosophical teachings can influence young people's spiritual inclinations.

Delaney (2003) suggests that many young people turn to spirituality as they navigate questions about the meaning and purpose of life. However, Syvertsen et al (2016) consider friends and social groups can impact a young person's spiritual beliefs and practices. Exposure to spiritual content through books, movies, social media, and other digital platforms can also spark interest in spirituality.

Rathore & Kriplani (2023) describe that traumatic events, significant life changes, or moments of profound insight can lead young people to seek spiritual answers. Spirituality can offer a sense of peace and mental well-being, which might attract young people seeking relief from stress and anxiety.

According to Jungian psychology, spirituality can be a means to achieve individuation and a deeper connection with the self. It can provide a refuge from the challenges and tensions of the social environment, offering inner peace and solace. This perspective suggests that spiritual practices can help

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young people cope with psychosocial conflicts and emotional distress. (Wagenseller, 2012). Gottlieb (2012) argued that spirituality can also serve as a psychological defense mechanism.

Examining a young person's true motivations for choosing a spiritual path is crucial because it offers deep insights into their psychological state and personal needs. This understanding can reveal whether their inclination toward spirituality is driven by a genuine quest for meaning and fulfillment, or if it serves as a coping mechanism to deal with stress, anxiety, or other underlying issues. By unraveling these motivations, psychologists, families, and the individuals themselves can better navigate the potential impacts on their overall well-being and life trajectory, ensuring that their choice supports their holistic development rather than becoming an escape from life's challenges. In essence, it's about ensuring that their spiritual journey is enriching and constructive, not merely a retreat from the pressures of modern life.

Case History:

Mr. J.L. is a 25-year-old male, Hindu, from upper socio-economic status, hailing from urban background, Psychology undergraduate (B.A.) and currently a Career Counselor Trainee accompanied by his father. His chief complaints were struggles with societal norms, lack of career focus, maturity and responsibility issues and difficulty in social relationships. The informant's main concerns were his inclination for spirituality at a young age and thinking of joining an ashram.

The patient reported he always was inclined to deeper, philosophical things and has not paid much attention to practical aspects like work and social life. He struggles with fitting into society and has not prioritized having a stable career or a consistent group of friends. He finds it difficult to become emotionally independent from his parents and feels he is not yet mature or responsible. He has relied heavily on others and feels uncertain about managing on his own. He got into spirituality and was considering joining an ashram. He feels his situation is getting worse and yet he is working on being more practical in his life.

Reportedly, in childhood, he had a comfortable and warm home environment, though he felt his mother was emotionally distant despite her efforts. She was overly protective and pushed him toward academics, leading him to always be accompanied by others and struggle with handling daily tasks independently. He perceives his mother as socially and emotionally distant. His father was easygoing, but he feels a lack of emotional connection with him, believing his father was out of touch with his own emotions and did not provide effective parenting. He also feels he was not rebellious enough as a child.

He has a history of experimentation with Cannabis and has not taken it for many months since the assessment was done.

His father is a well-positioned official with Govt of India and seems to be the primary support of the client. He reports that the family environment is almost perfect, and the house may be considered as an ideal house for almost all possibilities related to life. From the side of the father, reported affection and respect among the family members is 9 out of 10. There is no history of family being extremely religious or spiritual.

Methodology:

Somatic Inkblot Test Web version (SIT) was administered on the patient following standard procedure (Cassell & Dubey, 1990, 2003 and Dubey et al, 2019). The patient's responses and the rejected images were analyzed using content analysis and psychoanalytic interpretation. The Sacks Sentence Completion Test (Joseph M. Sacks & Sidney Levy,1950) was also administered to further explore the inner conflicts of the patient. The 16 PF Personality Factor Questionnaire (Raymond Cattell, 1949) was used to gain insight into his personality structure including both the general and specific traits. Additionally,

Thematic Apperception Test (TAT) (Henry A. Murray & Christiana D. Morgan, 1930) was administered to assess his interpersonal relationship, emotional functioning and social perception.

Findings of Somatic Inkblot Test:

Image 1**:** **"**A Human Heart. Reminds me of being in the womb. The black thing on the left looks like a little boy holding on to the stomach of the womb or something. The red thing is where the oxygen comes from". The response "being in the womb" indicates regression, which provides him with a secure place. This also suggests his immaturity and flight from facing the demands of society.

Image 2 **"**The Tree of Life or Christ the Redeemer came as first choices. Also, maple leaf for some reason. Crucifixion could be another. It reminds me of surrendering to God. Not an exact objective experience but an ongoing subjective feeling". It may indicate escaping from facing reality and taking spiritual shelter.

Image 3 "Looks like a bird, maybe a penguin sending a heart signal to a black cloud. It also looks like a clown's smile. I'm more comfortable with the latter. It reminds me of my psychedelic trip when I saw mickey mouse in the sky hanging out with the clouds". The response indicates his wishful thinking to have love and affection during unpleasant situations which he finds difficult to manage in his favor. The client must be encouraged to verbalize the situations which he feels unpleasant, difficult, and painful.

Image 4: "On the right I see the mushrooms clouds from Hiroshima Nagasaki. On the left, an hourglass with a ball on top. Also, a vagina with a spermatozoon entering it. Reminds me of the time I was being conceived. And the ball reminds me of basketball. The atom bomb well watching Oppenheimer". The responses indicate blaming himself right from the time when his mother conceived him. He has avoided perceiving "Teddy" which may indicate parental deprivation during childhood, this might be a perceived deprivation which must be inquired during therapy to address the issues.

Image 5: "Stripper lady or Clown. Apple on top or could be disco lights as well. The time I came out of my mother's womb". It may indicate his regression, more often, seen in dissociative clients.

Image 6: "Two people holding hands sharing love. The time I was with my girlfriend in college. Beautiful times". Normal responses and wishful thinking to have pleasant time with his girlfriends.

Image 7: "Looks like an ear, a pig's nose or something, or again vagina due to the pink part and opening. The time I came out of my mother's womb or never left it." The regression is obvious again in this image and "The time I came out of my mother's womb or never left it". It indicates that the mother's womb was the safest place for me and if a choice was given, I would have never come out from my mother's womb. This further indicates his inability to cope with the demands of society.

Image 8: "Someone is drowning and reaching out of the ocean with their hand. Doesn't remind me of much but probably all the times I overcame hardship. It reminds me of rising from the dead" The response may indicate a severe adverse situation with lots of problems and the client is feeling helpless. Such people share their problems during therapy sessions.

Image 9: "Two cute birds or elephants kissing or just having fun. Reminds me of my time with my girlfriend or best friends in school and college". It is a normal response indicating his desire / wishful thinking and sexual fantasies to have pleasant moments with his partner/friends.

Image 10: “Heart break. Inside a Ribcage. Reminds of the time my girlfriend left/broke up with me”. It indicates his broken love affairs with his girlfriend. Explore during therapeutic intervention if he had such love affairs in the past and if it has an impact on his personality. It also indicates that he has suffered from frustrating life situation which may lead to a pensive mood in future.

Image 11**:** “Heart or vaginal opening. It reminds me of love. The heart is the bigger theme here. I can also see a horse staring at me. Reminds me of being engulfed in spiritual love”. It indicates sexual fantasies and desire to have erotic relationships.

Image 12**:** “Having Rajma and Rice. Also looks an ultrasound they do before a child is born. I also see a cross which reminds me of the time I went to church”. Kidney is the most common response in this image. Persons suffering from Kidney problems or having some significant family members suffering from kidney problems, may avoid seeing Kidney. Perceiving CROSS may indicate spiritual support to manage his problems.

Image 13: “Some fat guy lying spread eagle on his bed from his last pizza. At least he has love in his heart. That's why the red symbol shows. Angels by his legs”. Perceiving Bat/Bird/Tortoise and two children is a normal and healthy response. It indicates a good interpersonal relationship with parents/ and authority figures. The bat/ bird/tortoise may represent authority/father figure. Persons with conflicting relations with father/authority may avoid perceiving Bat/Bird or two babies/children in this image. Not perceiving two children/babies is a strong indication of conflict with his father, which must be addressed during therapy sessions.

Image 14: “Spinal Column. Reminds me of back pain and spinal issues. Also, my rotator cuff injury”. The image helped in processing the unconscious painful material like “back pain and spinal issues” a constant source of pain. He must be referred for pain management.

Image 15: “I see a cranium, the eye of a dragon, vagina, and beetle. The eye of the dragon is the fire inside me. But it doesn't elicit a particular memory”. Female sex organ is the normal response indicating healthy erotic imagery. The eye of a dragon may indicate his suspicious attitude.

Image 16: “A lot of potential things. Contemporary Dance, a person trying to wade through his challenges, contents of consciousness. It reminds me of my current attempts to clear out the dirt within my psyche”. Fetus is the normal response in this image. Avoiding perceiving fetus in this image may indicate trauma of abortion with his female partner or abortion in some family members.

Image 17**: “**A woman's breast and grapes. It reminds me of the times I have watched porn and enjoyed it. Also, grape juice”. Breast is the normal response in this image. Perception of breast may indicate good interpersonal relationship with a mother or mother figure.

Image 18: “Tense parents. Always arguing with each other, never happy with each other. Complaining about each other behind each other’s backs”. This may project his perception of parents who are not in good relationship with each other. It also indicates his conflicting interpersonal relationship with father and mother.

Image 19: “Taking off a mask, seeing your own reflection, dropping your ego-persona. It reminds me of all the things Carl Jung has told us about the falseness of egoic identity. It reminds of the spiritual process which involves deidentification from one's egoic identity. It's about recognizing one's true self”. Two people, particularly father and son are a normal response. Avoiding perceiving two people in this image may indicate a poor interpersonal relationship between father and son. The response further indicates introspection to improve your image and ego conflict probably between the real self and ideal self or between father and son which must be addressed during therapy.

Image 20: “Therapy room. Client and therapist talking about issues. Reminds me of the times I have provided therapy for clients and the times I have been in therapy”. It is a normal response.

Image 21: “Abstract art. Reminds of the times I made an abstract drawing. I also see knives threatening some apparent figure. I remember dad picking up a knife and throwing it a few feet away from mom to express his anger. We didn't want to spend time with his side of the family one evening, that's why. It was more so mom's idea, but I went along with it”. The response “I also see knives threatening some apparent figure” may indicate his aggression though he has narrated the incidence which he witnessed in the past between his father and mother. It also indicates his hatred towards his father which he has expressed in other images.

Image 22: “Sexual feelings, Love, Vagina, women, ecstasy, hazed. Reminds me of the time I was in bed with my girlfriend but also of the lack of intimacy in my life now. And all the 'could have been' with women in my past”. It may indicate his frustration with the women in the past and fantasy to have good relationship with female partner in future.

Image 23: Penis head, Rocket ship, Sperm cell, Snake. Reminds me of the time I was inside my girlfriend. It is a normal response, and it also indicates his sexual fantasies.

Image 24: “Spider. Weird Hairy Object. Coldness in Love. Reminds me of the coldness of my mom towards me in childhood always trying to make me study and not letting me develop into an independent and whole individual with my own needs and wants. It reminds me of rage towards and my desire to kill her. I won't but you get it. Also, the coldness between mom and dad to some extent. The coldness of my eldest brother towards mom and dad. The coldness of my middle brother to us. A very cold family with love locked”. The responses indicate lots of frustrating situations in the past which have impacted on his personality development. The perceived lack of affection from his mother, very aggressive feelings to the extent to kill his mother, aggression towards his brothers are projected in this image. Such clients must be addressed during psychotherapy session to control his aggression. Often, such people can show homicide behavior.

Image 25: “Broken condom, those guns like circus toys, party blow toy. No memory association but maybe playing with my toy gun as a child, not being able to have sex with someone”. The response “Broken condom” may project his anxiety/tension which he had in the past with a female partner.

Image 26: “The dude is dead or dreaming of paradise. Or getting a hot rock massage. Or about to hatch from the egg. Reminds me of all the times I lay in a quiet contemplative haze investigating the nature of self and reality. Letting my karma wash away with the passage of time. It reminds me of Marcel Proust's novel 'In Search of Lost Time.' A dreamlike quality, nostalgia, a longing for reality to not be real. Trying to find an escape. Restful sleep”. It’s a normal response.

Image 27: “Child looking at himself in the mirror. Cute. He has a tail. Weird. Reminds me of me checking myself out in the mirror even as an adult. Seeing how good looking I am or how my muscles look”. It is a normal response.

Image 28: “Mother holding child. Mary holding Jesus. I don't recall mom holding me as such. I am as avoidant as her now. Maybe it reminds me of my attempts to get her to hug but she rejected me. It indicates his inner cry not having affection and love from his mother”. He has a severe craving for affection. A few sessions of family therapy may help in addressing such craving for affection and may help in improving interpersonal relationship with mother, father and brothers.

Image 29: “see a sad boy with one leg and puddle underneath him. Earlier I saw he was about to punt a soccer ball across the field which reminded me of playing sports in school with my friends. It

reminds me of me when I feel my heart area, but I am not that sad as a person". The response "a sad boy with one leg" indicates his inferiority and severe pensive mood. Pharmacological aid with psychotherapy helps better with good results in such cases.

Image 30: "Ghost family. Eerie. Could be an ant family as well. Like a 'black mirror' episode. Reminds me of my brothers before I was born". The theme of a family where every person is feeling disturbed, anxious, sad, with poor interpersonal relationship is projected in this image. Poor interpersonal relationships are projected in many images (such as 4,18, 19, 21, 24, 28, 31).

Overall Interpretation of the Somatic Inkblot Test (Key Themes and Underlying Dynamics):

1. **Regression and Dependence:**
   - **Womb Imagery:** The recurring theme of the womb suggests a strong desire for regression to a more secure and dependent state.
   - **Emotional Dependence:** The reliance on others, particularly parents, and the avoidance of independence highlight a deep-seated dependency.

2. **Unresolved Emotional Needs:**
   - **Parental Neglect:** The frequent references to parental figures, especially the mother, suggest unresolved emotional needs. The lack of emotional connection and support may have contributed to feelings of abandonment and insecurity.
   - **Craving for Affection:** The recurring theme of affection and love indicates a strong desire for emotional validation and connection.

3. **Interpersonal Conflicts:**
   - **Family Dynamics:** The images depicting tense parents and conflicting relationships within the family suggest unresolved interpersonal conflicts. These conflicts may have contributed to his difficulties in keeping healthy relationships.
   - **Aggression:** The references to aggression, such as the desire to kill his mother, indicate underlying anger and resentment.

4. **Sexual Fantasies and Desires:**
   - **Erotic Imagery:** The frequent references to sexual organs, erotic acts, and fantasies suggest a healthy sexual drive and a desire for intimacy.
   - **Unfulfilled Desires:** The longing for intimacy and the references to past relationships may indicate unfulfilled desires and emotional frustrations.

5. **Spiritual Pursuits and Defense Mechanisms:**
   - **Escaping Reality:** The references to spiritual themes and a desire to surrender to God may suggest an attempt to escape from the challenges of reality.
   - **Defense Mechanism:** Spirituality could be a defense mechanism to avoid confronting underlying emotional issues and conflicts.

Sack's Sentence Completion Test:

The Sacks Sentence Completion Test (SSCT) is a projective personality test that provides insights into an individual's underlying thoughts, feelings, and conflicts. In this case, the SSCT revealed four primary areas of conflict:

1. **Attitude Towards Family Members**
   - **Conflicted Feelings Towards Mother:** The client expressed both appreciation for his mother's care and frustration with her over protectiveness.
   - **Emotional Distance from Father:** He felt emotionally distant from his father and longed for a stronger connection.
   - **Childhood Pampering:** The constant pattern of pampering may have contributed to his current dependency and difficulty with independence.
2. **Attitude Towards Heterosexual Relationships**
   - **Isolation and Frustration:** The client reported feelings of isolation and frustration in relationships, possibly due to emotional barriers or distorted views on intimacy.
   - **Fear of Closeness:** He expressed a fear of emotional closeness and vulnerability, hindering his ability to form intimate connections.
3. **Interpersonal Relationships**
   - **Social Anxiety and Avoidance:** The client exhibited social anxiety and avoidance behavior, impacting his ability to engage with the world and fulfill adult responsibilities.
   - **Fear of Rejection:** He may have harbored a fear of rejection, leading to his reluctance to fully participate in social interactions.
4. **Attitude Towards Own Abilities**
   - **Guilt and Shame:** Mr. JL expressed a deep sense of guilt and shame regarding social interaction and personal freedom.
   - **Gap between Aspirations and Reality:** Despite his desire for success and independence, he struggled to bridge the gap between his aspirations and his current reality.

Thematic Apperception Test (Murray et al, 1930):

Most of his stories revolved around interpersonal and intrapersonal relationships. His stories demonstrated unsatisfactory personal and emotional adjustments, revealing a need for achievement, succorance, and affection. Dominant negative emotions such as sadness, hopelessness, and guilt are evident, alongside poor stress coping and problem-solving abilities.

Sixteen Personality Factor Questionnaire (16 PF):

Findings suggest that the individual is quick to grasp ideas and is intelligent, indicating a fast learner. However, he may be accepting of his emotional problems rather than actively addressing them. He tends to be reserved, introspective, and cautious, often appearing serious or overly formal, but is generally viewed as reliable and dependable.

Socially, he exhibits shyness and a preference for a few close friends, avoiding larger groups and busy environments. His emotional sensitivity and imaginative nature may lead to feelings of inferiority and difficulty expressing himself promptly. In addition, he shows tendencies toward impatience and dependency, alongside a creative and unconventional mindset. While he may have strong personal interests, these can lead to unrealistic ideas and occasional emotional outbursts, reflecting a struggle with everyday responsibilities.

Discussion:

This analysis delves deeper into the commonalities observed in the findings of the Somatic Inkblot Test (SIT), Sacks Sentence Completion Test (SSCT), 16 Personality Factor Questionnaire (16PF), and Thematic Apperception Test (TAT) in the case. These psychological assessments provide a comprehensive picture of his personality, dynamics, and underlying conflicts.

Common Themes

1. **Emotional Neglect and Unmet Needs:**
    - **SIT:** Images frequently evoked themes of regression and a flight from facing societal demands, suggesting a need for emotional security.
    - **SSCT:** Responses revealed conflicted feelings towards parents, particularly his mother, indicative of emotional neglect and unmet needs.
    - **TAT:** Stories highlighted a desire for achievement, succorance, and affection, further emphasizing the lack of emotional validation.
    - **16PF:** The individual's reserved and cautious nature, coupled with his social anxiety and preference for solitude, suggests a difficulty in forming meaningful relationships.
2. **Social Anxiety and Avoidance:**
    - **SIT:** Several images revealed social anxiety and avoidance, such as the fear of rejection and the desire for solitude.
    - **SSCT:** Responses indicated social anxiety and avoidance behavior, preventing him from fully engaging with the world.
    - **16PF:** The individual's shyness, preference for a few close friends, and avoidance of larger groups align with social anxiety.
3. **Dependency and Immaturity:**
    - **SIT:** The individual's regression to a more childlike state and reliance on others suggests a level of dependency.
    - **SSCT:** Responses revealed a struggle with independence and a desire for guidance, indicating dependency issues.
    - **16PF:** The individual's tendency towards dependency and impatience further supports this theme.
4. **Inner Conflict and Guilt:**
    - **SIT:** Images often evoke feelings of guilt and shame, particularly when confronting difficult emotions or memories.

- **SSCT:** Responses revealed a deep sense of guilt and shame surrounding social interaction and personal freedom.
- **TAT:** Stories demonstrated negative emotions like guilt and sadness, suggesting internal conflicts.

Interconnectedness of Findings

The interconnectedness of these findings is evident. The emotional neglect experienced in childhood likely contributed to the development of social anxiety, dependency, and inner conflict. These factors, in turn, may have influenced client's inclination towards spirituality as a coping mechanism.

Clinical Implications

The SIT findings reveal a complex interplay of unresolved emotional needs, interpersonal conflicts, and defense mechanisms. Our client's spiritual inclination may be a coping strategy for dealing with these underlying issues.

Therapeutic Interventions:

Based on these findings, therapy could focus on:

- **Addressing Unresolved Emotional Needs:** Exploring childhood experiences and providing a supportive therapeutic environment to address emotional neglect and unfulfilled needs.
- **Resolving Interpersonal Conflicts:** Examining family dynamics and developing healthier communication and relationship skills.
- **Managing Aggression:** Utilizing therapeutic techniques to help him understand and manage his underlying anger and resentment.
- **Exploring Spiritual Beliefs:** Examining the role of spirituality in client's life and helping him to integrate it in a healthy and balanced manner.

Conclusion:

In conclusion, the case illustrates a complex interplay of unresolved emotional needs, interpersonal conflicts, and defense mechanisms. The robustness of the Somatic Inkblot Test (SIT) stands out for its vastness and depth, surpassing the insights offered by the combined results of other psychological assessments. SIT alone has uncovered significant themes such as emotional neglect, dependency, and spiritual inclination, providing a comprehensive understanding of client's psychological state. His spiritual inclination, as identified by the SIT, appears to be a coping strategy for addressing these underlying conflicts. Understanding his motivations for choosing a spiritual path is crucial, as it sheds light on whether his spiritual inclination is a genuine quest for meaning or a defense mechanism to avoid confronting emotional conflicts. This nuanced understanding, facilitated primarily by the SIT, can guide appropriate interventions to support his holistic development and help him balance his spiritual aspirations with practical life demands.

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Somatic Inkblot Test and its Application

B. L. Dubey & Anand Dubey

The Somatic Inkblot test (SIT) is a semi-structured, projective, diagnostic instrument and an adjunct to psychotherapy. The **SIT** is available at *www.dubayhealingcenter.com*, with 30 images, was released for quick assessment, after 30 years of intense data collection on clinical, organizational, and normal groups. Researchers have reported **high reliability and validity** of the test (Dubey et al, 2019) The papers published in the international journal, "SIS Journal of Projective Psychology and Mental Health"(www.somaticinkblots.com) clearly show the advantages of the SIT both in the "individual" as well as "group administration" settings.

The SIT automates the entire "psychological test life cycle" including administration, scoring, interpretation, reporting and diagnostic collaboration. In addition to quantitative analysis, the SIT facilitates and emphasizes content analysis, psychoanalytic interpretation, and symbolic interpretation via a database of research made available as "hints", "Artificial Intelligence" and case studies. The help of "Artificial Intelligence" in the assimilation and interpretation of data has worked in a big way. The mental health professionals using SIT will have the advantage of AI and Symbolic Interpretation while scoring and interpreting the responses given by the client. Inkblot-evoked images can highlight otherwise hidden aspects of the inner emotional world of the clients. These may reveal to the professional past traumatic events and unexpressed distressing emotions, which might otherwise only surface in disguised symbolic dreams. It takes about 30 minutes to complete the test (Dubey & Dubey, 2021).

The technique is based on spontaneous, individually generated responses to semi-ambiguous figures, which elicit intrapsychic associations specific to the person presented with them. The SIT images evoke symbolism and meanings unique to the responding individual. The test responses (Total R, Human, Animal, Anatomical, Sex, Most Typical, Movement, Rejection and Pathological responses) can be differentiated from peer norms and clinical indices and can be analyzed according to internationally recognized psycho-diagnostic criteria. The procedure is an adjunct to psychotherapy because responses can be further explored to create a more effective treatment plan, and can be re-addressed in later discussions, providing opportunities to elicit deeply defended material. During the administration of the SIT procedure, clients may abreact emotional conflict raised to consciousness by the images, which can be a therapeutic experience (Cassell & Dubey, 2003).

The SIT has an amazingly simple 11 scoring indices common to Rorschach, such as R, H, A, At, Sex, MT/P, Movement, Rejection and Pathological responses (PAS, HAS, Depression and Paranoia). It is less complicated than existing inkblot tests since it emphasizes content analysis (Cassell & Dubey, 2003).

The Test was administered to different clinical groups – Anxiety, Depression, PTSD, Schizophrenia, Sex perpetuators, Criminals, Neurotics, Marital maladjustment, and the findings were very encouraging. The images take the client back in time and help to verbalize the repressed material lying down in the storage of unconscious mind. Such verbalization is very useful during therapy sessions.

The Test was also administered to business executives in different situations and as expected, the

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data revealed several higher mental functions such as productivity, imaginative ability, controlled emotionality, good adjustment, and group conformity (Dubey, 2012).

Application of SIT in different Field:

Application in Industry and Business Organizations:

Pre-employment personality profiles, assessment, and tests are becoming popular during employee selection process. When the right personality assessment is used as part of the hiring process, it is expected to tremendously benefit the organization. The SIT application empowers the selection processes by more rapidly screening a person with desirable traits such as an individual who is mature, confident, is a visionary, a good team-maker etc. It also brings to the surface information which the individual failed to report in a standard interview. Moreover, once the candidate is initially selected in an industry, owing to the opportunity of having a follow-up with the SIT being a relatively objective computerized instrument, can prevent economic losses that may occur later if the person is found to be a mismatch regarding the demands of the job.

The SIT is also administered to executives in various private and public sector organizations in India for personality assessment during selection and promotion interviews. The findings have been very encouraging. The SIT was found to be a dependable test in assessing certain important traits such as "Interpersonal Relationship, Healthy Mind-Body Imagery, Team Building, Creativity, Imaginative ability, Controlled hostility and aggression, Erotic disturbances, and Ego strength", which are much required among successful business executives.

Application in Clinics:

The SIT images can highlight otherwise hidden aspects of the inner emotional world of individuals taking the test. These may reveal to the professional certain past traumatic events and unexpressed distressing emotions which might, otherwise, only surface in disguised symbolic dreams. During clinical interviews, a lot of unprocessed unconscious materials are brought out to the surface. Such material is very useful during therapeutic intervention and many clients commented that the "test is particularly designed for me". The purpose of psychotherapy is "to make the client conscious of the underpinnings of exhibited mental states" and the SIT responses are found to be an effective intervention procedure. Many clinical cases are reported in a recent SAGE publication (Dubey et al, 2019 and in 63 issues of the SIS Journal of Projective Psychology and Mental Health (www.somaticinkblots.com).

Somatic Inkblot images have also been used in a variety of clinical cases to detect early symptoms with positive results. The SIT responses were able to discriminate among the major diagnostic groups such as Anxiety disorder, Psychosomatic disorder, Affective disorder, PTSD, Sexual disorder, Alcohol, Drug and Substance abuse, Depression, Suicidal ideation, Schizophrenia and Criminals (Cassell, 1980, Cassell & Dubey, 2003; Dubey et al, 2019). The projected responses of a case having Depression with PTSD have been interpreted in the present article to understand the efficacy of the Somatic Inkblot Test.

Application in Schools to have safe employees:

It is a documented fact that victims of child sexual abuse are at a much higher risk. In several cases, it leads to long-term psychological and physical disorders including depression, guilt, and anxiety. The lingering memories of sexual abuse in schools are often difficult to suppress. The schools must be safe for children. Parents should be able to trust teachers and other employees such as bus drivers, cleaners, security guards, and other staff in the proximity of the children. Sexual abuse generally takes place in familiar settings like school toilets, playgrounds, while on transportation or while students are on field trips. The administration should also protect and keep children safe from abuse, assault, bullying, and other traumatic events. In most cases, the perpetrator runs away from the school and is often not punished. We

don't have biometric data base to check such people in developing countries. They go un-detected and often shift from one school to another and repeat their behaviors.

Keeping the above facts in view, the school system must hire employees who are safe for the children. They should be mature, have smooth interpersonal relationships and adjustment, be reality-oriented and have awareness of surroundings, with a non-hostile attitude and have no erotic conflict. Persons with such positive traits are expected to be a good fit in the school system. The SIT images are found helpful in detecting people having undesirable personality traits.

Application in Forensic Laboratories to detect Criminals:

The analysis of inkblot response suggests the following possible indicators leading to the detection of criminals:

High number of aggression and hostility, (HAS), preponderance of murder, blood, attacks, conviction, homicide/suicide, high erotic responses (perceiving more sexual anatomy, and sexual body parts such as genitalia, breasts, bust, preponderance of sex responses (more than 5) even on images not depicting erotic imagery, immaturity (low Human and high Animal responses), low "Most Typical (MT) responses, (Evading reality and social norms). The SIT responses help in detecting persons with criminal personality orientation.

Application in Matchmaking:

Parity among the couples is the most important factor, which must be ascertained before the marriage. Most of the couples say that they like each other, she/he looks presentable and is a very caring person. However, even after staying together for years, they are not aware of the inner motivating unconscious forces of their partners. Knowing about their family, education, income, and social status is not enough. The Somatic images help in understanding the total personality profile (level of self, interpersonal relationship with different sets of people, awareness of surroundings and contact with reality, level of erotic desire, expression of hostility and aggression, level of team-making and expression of feelings). These traits must be matched to ensure compatibility among the couple. The SIT may help in understanding the total personality and the kind of parson one is.

Please visit our website: http://www.dubayhealingcenter.comand take the test to see its simple administration, scoring and interpretation (Quantitative and Content analysis). Please see the Manual of the Test and book "Inkblot Personality Test -Understanding the Unconscious Mind, Dubey, B.L., Banerjee, P. & Dubey Anand (2019) Sage Publications Inc.

Please feel free to write for more information and help on our email (ad@dubay.bz OR bldubey@gmail.com).

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The Role of Imagery in Psychotherapy: Integrating Somatic Inkblot Test (SIT) and Imaginative Experience Technique (IEt)

Nicole Compagnoni & Anand Dubey

The integration of the Somatic Inkblot Test (SIT) and Imaginative Experience Technique (IEt) in clinical practice offers an innovative approach to exploring the unconscious and somatic dynamics of patients. The SIT, a projective test based on inkblots, allows access to latent emotional and cognitive content through the interpretation of ambiguous images. Combined with IEt, which involves guided visualization and the active exploration of internal scenarios, it fosters greater somatic and symbolic awareness. This synergy can enhance psychological diagnosis and facilitate a deeper therapeutic process, promoting the integration of body, mind, and emotional experiences.

Introduction:

Imagination and fantasies have played a significant role in the development of human life, serving as a means to access the depths of the unconscious. In various philosophical, psychological, and therapeutic traditions, imagination has been recognized for its ability to explore our inner selves, reveal hidden conflicts, and facilitate healing and transformation processes. Psychotherapy has harnessed imagination as a powerful tool for understanding and treating psychological suffering, employing techniques that range from dream interpretation to guided visualization, as well as more contemporary approaches such as Imaginative Therapy.

This paper will examine the role of imagination in psychotherapy to promote therapeutic change. It will focus on the technique of Imaginative Experience, which uses mental and symbolic images to enhance awareness and psychological growth. Additionally, it will explore the integration of this technique with diagnostic tools like the Somatic Inkblot Test (SIT), which investigates somatic and psychic responses through ambiguous images.

The study aims to raise awareness within the scientific community regarding the need for more in-depth research on the integration of various imaginative techniques in clinical practice. Specifically, it will look at how combining the Somatic Inkblot Test with Imaginative Experience can inspire therapists to engage in profound, transformative, and creative psychotherapeutic work. This approach may help patients resolve inner conflicts, overcome emotional blocks, and develop a more integrated personality.

The imagery in psychotherapy

The use of imagination in psychotherapy has deep historical roots. Throughout time, humans have relied on their imaginations to convey messages and emotions. According to scholars (Sternberg, 2000), mental images emerged alongside the ability to reason. At an evolutionary level, the ability to imagine helps us reflect on possible scenarios and contributes to our understanding of object permanence.

Imagination plays a significant role in human life, and ancient philosophy has extensively explored this concept. Over the years, several theories regarding imagination have emerged, with two main theories standing out: the pictorial theory and the theory of weak perception. The pictorial theory posits that mental images resemble paintings or photographs in how they represent objects from the external world, resulting in a subjective reconstruction. In contrast, the theory of weak perception suggests that imagining is akin to

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perceiving, albeit under less optimal conditions (Passerini, 2009). According to this view, a mental image is a synthesis of sensory data that becomes less defined over time.

Pictorial theory was dominant until the rise of cognitive psychology. Aristotle famously defined imagination as "sensation without matter," establishing an early link between perception and imagination, suggesting that mental images replicate the external world. Descartes (1619) supported Aristotle's perspective, asserting that while imagining differs from thinking, it closely resembles perception.

During the Renaissance, there was a real turning point that laid the foundations for the use of imagery in psychotherapy. Imagination was recognized as the cause of mental and physical disorders and therefore it had to be also the tool to cure them.

With the birth of psychoanalysis in the nineteenth century, imagery took on central importance. Sigmund Freud, through the interpretation of dreams and fantasies, explored the depths of the unconscious. For Freud, the artist is the one who detaches himself from reality because he cannot adapt to the renunciation of instinctual satisfaction that reality demands and lets his desires for love be realized in fantasy (Passerini & De Palma, 2016). Carl Jung further expanded this concept, introducing the idea of archetypes and the collective imagination. Jung developed the "active imagination", a method that encouraged patients to explore their inner images for treatment and self-knowledge. In general, psychoanalysis has been interested in the artist's personality and his unconscious dynamics: the work of art is a means of consolation, defence and escape from an unrewarding reality. More recently, psychodynamics has added the restorative function of artistic behavior, laying the foundations for the use of artwork.

In the 1950s and 1960s, Gestalt therapy and humanistic currents innovatively incorporated the imagination. Fritz Perls (1978) with his approach centered on present experience, used role-playing and visualization techniques to help patients contact repressed emotions. These approaches emphasized the importance of authenticity and immediate expression, allowing patients to explore their inner world directly and creatively, so imaginative techniques became more and more widespread. With the emergence of somatic therapies in the 1990s, imagination was further integrated into clinical practice (Cassell, 1990). Approaches such as Somatic Therapy and Sensory Focusing emphasize the connection between body and mind. Imagination techniques were used to help patients recognize and work through bodily experiences, promoting an integrated awareness of emotions and physical sensations.

The use of the imagination in psychotherapy is supported by recent research in the field of cognitive psychology. Studies with fMRI show an activation of the same areas of perception when people are asked to imagine. Perceptual processes organize sensations into coherent images by integrating spatial, temporal and memory information thanks to bottom-up and top-down processes. The first process, described as bottom-up, concerns the perception that derives from the sensory input which is then compared with the contents of the memory. The second process, described as top-down, instead refers to the way our brain influences perception using prior knowledge. Both processes are important because they allow for a unitary perception of reality, which leads to the creation of a coherent mental image.

Furthermore, neuroscience, by studying the consequences of lesions of the different pathways to the visual cortex, has shown that when these lesions determined a perceptual deficit, they also determined a deficit in the capacity for imagination. For example, patients who have become blind due to brain damage may lose the ability to form visual mental images. It is good to underline that imagination and perception share some brain systems, but not all. Perception requires the activation of primary sensory structures, which is not required in the imagination but instead needs to activate memory (not required in perception). Images and perceptions are categorically different mental entities (Passerini, 2009). Images need a will, in most cases, to be activated and attention to be continuous, elements that do not emerge in perception.

In conclusion, thanks to scientific confirmations, imagination is now recognized as a powerful therapeutic tool. Techniques such as Mindfulness, Art Therapy and Imaginative Experience highlight the

importance of creativity and narration in therapy. Research continues to demonstrate how the imaginary can improve emotional well-being and facilitate change; it is a key element in understanding and treating the human being in its complexity.

The Imaginary, contrary to fantasy, a final moment of abandonment to thoughts and images enriched by pleasant sensations, has a predominantly creative and energetic character and beyond the resolution of conflicts and psychopathological symptoms, it achieves an enlargement of one's potential and capacity, to reach a complete and integrated personality (Passerini & De Palma, 2016)

Somatic Inkblot Test (SIT)

The *Somatic Inkblot Test* is a psychoanalytically based projective test. According to the authors, (Cassell, 1980, 1990, Cassell & Dubey, 2003, Dubey et al, 2019) the test examines a deep level of consciousness starting from the sequential presentation of 30 images made with the inkblot technique, 'each of which represents a semi-ambiguous visual stimulus based on a specific anatomical structure and aimed at arousing the subjects' somatic perceptions. These stimuli demonstrate typical and atypical response potentials. The technique is based on spontaneous, individually generated responses to semi-ambiguous figures, which elicit intrapsychic associations specific to the person presented with them (Dubey et al, 2019). Thus, at the heart of the construction of such a test are anatomical images capable of evoking somatic symptoms, conversion reactions, somatic hallucinations and sexual dysfunction.

The interest in bodily perceptions was already highlighted by Rorschach, who suggested the existence of links between anatomical images and physical sensations (Dubey, 2000). Unfortunately, Rorschach was unable to test his hypothesis before his death; therefore, many scholars, including Cassel, began to explore how anatomical responses correlated with health-related fears and how these responses related to changes in body awareness, which may influence the onset of symptoms. However, SIT goes beyond this physical dimension: it also reveals current suffering, trauma, dysfunctional interpersonal patterns (such as the relationship with the mother figure) and personality structures. Each inkblot is associated with a flow of images like those found in dreams, daytime fantasies and visual hallucinations, and the context is crucial in interpreting these contents, both directly and symbolically (Cassel, 1980). In this sense, SIT uses art as a diagnostic and therapeutic tool, particularly for those who find it difficult to engage in traditional art practices.

SIT is not only an aid for the psychologist but also important for the patient himself, who can discover his latent contents and become aware of them and his suffering (Compagnoni & Dubey, 2020). This test is designed for self-administration.

The interpretation of the responses is made by the therapist, although in a certain sense, it is co-constructed with the patient. After the patient has been left in intimacy with his or her unconscious, he or she 'helps' the therapist to assimilate the reason why he/she has perceived the responses in the image. The interpretation is based on the analysis of the associations and emotional reactions the subjects have to the inkblots. For example, the presence of fear, anxiety or nostalgia may suggest past traumas or unresolved conflicts related to body image. In addition to emotions, interpretation is concerned with investigating the content of responses: the images evoked may refer to how the person perceives himself, somatic symptoms or relational problems.

As claimed by the authors, the SIT is an X-ray procedure of personality which helps one to investigate the unconscious mind of a person and find the psychopathology of the case (Dubey, Banerjee & Dubey, 2019). Moreover, responses may change after the administration of psychotherapy, this is why the test can be administered to see the effect of pharmacological intervention and psychotherapy (Dubey, Kumar, & Dubey, 2018). Therefore, if used in conjunction with imaginative psychotherapy, not only will we get a clearer picture of the patient's unconscious, but we could also 'measure' the progress of therapy.

The Imaginative Experience Technique (IET):

The Imaginative Experience is a translation of the term rêve-éveillé (Desoille, 1970) has been used in Italy since the 1990s to indicate the imaginative material collected during the rêve session. Subsequently, after the mid-1990s, the term has been used to indicate a unitary theoretical-methodological model of Psychotherapy (Doddoli, 1970). This transition confers the Imaginative Procedure, as a methodology characterized by self-referential originality and internal coherence, although derived from the matrix of the rêve-éveillé (Bondi & Passerini, 1997).

The basic theory behind the procedure is that mental images originate from the interaction between memory, perception, and imagination. There is a complex set of elements and relationships that do not require a logical reconstruction, making them more easily accessible. The availability of mental images does not preclude simplicity in their conformation; on the contrary, different cortical areas are activated during imagination that show a set of memories, associations, perceptions, ideas, and emotions condensed within a single image. For this reason, the imaginary has the power to reveal what is not yet conscious to the individual. The imaginary space has the unique function of representing the inner world and allowing, when moving in it, a shift in time to move, means to change (Passerini, 2009).

Passerini et al. (2007) explored the relationship between body and imagination, investigating how the body is not only a physical reality but also a psychological and symbolic dimension that is experienced through the imagination. The study specifically focuses on the role that the body plays in imaginative experience, identity construction, and the process of symbolization. The assumption is that the perception of the body is not limited to its biological and physical dimensions, but that it is deeply influenced by culture, mind, and imagination. In this sense, the body becomes a place of symbolic experience, where representations, emotions, and fantasies intertwine and contribute to defining our identity.

The Operating Model is based on the idea that images are symbolic structures capable of preserving, unlike verbal communication, the emotional impact and therefore imply access to unconscious and conflicting areas by circumventing defenses. This involves a circularity between 1) imaginative experience, 2) semantic-propositional decoding, and 3) analysis of real-world situations.

Step 1: Imaginative Experience

In this context, the setting plays a crucial role as the patient must enter a 'dreamlike state'. The room must be adequately prepared to facilitate the attainment of this state. For instance, it is recommended to dim the lights, isolate external noises, and foster an atmosphere of well-being and neutrality. The therapist, seated in front of the patient, induces a state of relaxation using breathing techniques, progressive muscle relaxation, or meditation. This relaxation technique helps the patient to reduce external distractions and to connect with their inner world.

Below, a perceptual stimulus is proposed as a starting point for the narrative.

The stimuli used can be different: a) Verbal perceptual stimulus, for example: 'Imagine a forest in summer', b) Visual perceptual stimulus, for example: proposing an expressionist or post-impressionist painting, c) Spontaneous perceptual stimulus, for example: use of a metaphor or a saying used by the patient during previous sessions.

The choice of stimulus depends on the specific case. For instance, with individuals who exhibit limited creativity, it is preferable to utilize a visual stimulus rather than a verbal or spontaneous one. The choice also depends on the type of defenses that are intended to be overcome.

At this point, the therapist guides the imagination through the previously chosen perceptual stimulus and asks the patient to start narrating a fantasy story with a beginning, a development, and an ending. The narration will be recorded throughout the session, enabling the therapist to activate the freely floating attention.

This type of attention is based on the emotional resonance that the patient's narrative evokes in the therapist, and it is precisely in these cases that the therapist enters the imaginative production. The narration of the story is therefore co-constructed: the patient produces the fantasy story; the therapist intervenes to expand the scenario and facilitate symbolic movement.

At the end of the session, which usually lasts around 50 minutes, the patient emerges from the state of relaxation and reports their feelings. Specifically, the patient shares with the therapist how they are feeling now that the experience is over and how they felt during the experience. At the end of the experience, the patient must have time to reflect on their experiences and fully return to the present moment.

Step 2: Semantic and Propositional Decoding

In the next session, the imaginative material is subjected to encoding by the patient and secondarily by the therapist. In this regard, the patient attributes a meaning to the story created last time (semantic decoding), only then does the therapist intervene, providing a "propositional" synthesis of the meaning. The goal of this phase is to try to understand what the unconscious (and therefore the imagined story) is trying to communicate in terms of feelings and conflicts. Decoding is a "reading" of the situations imagined by the patient.

First, the patient is asked to try to give meaning to the content of the story told the time before and to explore all the emotions that have occurred. This is semantic decoding, which focuses on the emotional and symbolic analysis of the situations that emerged.

Then it is the therapist's turn to implement propositional decoding, which is a mode of interpretation that focuses on narration and specifically on the structure of the story. The therapist focuses on how the patient describes events, relationships and situations and how these can reflect thought patterns, beliefs and conflicts. For example, if the patient has imagined an abandoned park, semantic decoding will explore what this park symbolizes for the patient and what emotions are associated with it such as a sense of loneliness, abandonment or neglect. The propositional decoding will then try to explore what it means for the individual to "remain alone" by connecting the feelings of loneliness or abandonment to his experience.

Step 3: Analysis of real situations

After the decoding phase, the analysis of real situations is proposed, that is, the person begins to reflect on their issues with a consequent greater awareness. The imaginative experience opens a gap for the unconscious and by investigating real situations it allows the emergence of unconscious content by fixing them in the consciousness of the individual. In this final phase, the patient returns to contact with the reality of the here and now but, of course, with a different, deeper awareness. The imaginative experience has moved something and therefore promoted a change; this can be verified by exploring the patient's real story. It will take at least 3 or 4 sessions before the change is evident or internalized, but from the first sessions, we can notice a vertical movement in which the patient becomes more and more experienced. It is as if you were digging a tunnel through the mountains, it takes several days to pierce the rock and create a road but, once done, it will take a few minutes to travel.

Integrating Somatic Inkblot Test and Imaginative Experience Technique (IET):

During clinical practice, it is possible to integrate the administration of the Somatic Inkblot test with the use of imaginative experience sessions because both use the imagination as a way of directing to explore the deepest aspects of the individual's personality and promote a change aimed at healing. Below is a proposal for integration within the psychotherapeutic scenario:

- **Cognitive phase**: The first sessions are cognitive and anamnestic; therefore, SIT is an excellent tool to deepen the diagnosis and discover the issues that affect the most, to the patient.

- **Therapeutic contract**: The beginning of the therapy takes place after having stipulated the therapeutic contract, which defines the roles, expectations, responsibilities and objectives of the therapy, creating a relationship based on trust and collaboration. In this sense, both (therapist and client) undertake to respect what is stipulated in the contract and actively participate in the healing process. The contract also clarifies the number of imaginative experience sessions (usually about 10 sessions).
- **Exploratory phase**: Activation of imaginative experience sessions
- **Evaluation phase** ("therapy follow-up"): After a few weeks of imaginative experiences, it is possible to verify the presence of changes in the individual by administering the SIT a second time, probably if there has been a therapeutic movement, some SIT responses will have changed. This allows us to "measure" the progress of the therapy and not only that, the second administration of the test allows us to better understand which issues are more painful and also rooted in the patient's inner world. The test suggests what to continue exploring and what the patient's resources may be to use in future sessions if needed.
- **Final phase**: This is a crucial moment in the therapeutic process, in which the progress achieved is integrated and the patient acquires greater awareness of themselves, of their changes and the internal resources developed during the process. During this phase, the therapist and the patient work together to consolidate the successes achieved, address any residual resistance and ensure that the patient can independently face future challenges without the therapist's continuous assistance.

Conclusion:

Finally, the use of the imagination in psychotherapy is configured today as a fundamental therapeutic tool, which allows access to the deepest dimensions of the psyche and facilitates personal change. The journey through the imagination, which can make use of techniques such as imaginative experience and the Somatic Inkblot Test (SIT), allows us to explore and give voice to the most hidden aspects of the unconscious, favoring the understanding and transformation of painful experiences, conflicts and lived experiences. Imaginative experience techniques allow a co-construction of the narrative between therapist and patient, where mental images not only offer a symbolic space for emotional release but also a way to integrate internal resources, fostering self-knowledge and healing.

The combination of tools such as SIT and imaginative experience offers a complementary and dynamic methodology for psychotherapeutic treatment, which can highlight emotional and bodily aspects that escape rationality or simple words. The phase of semantic and propositional decoding helps to give meaning to the imaginative contents that emerged and to re-signify the patient's real-life experiences. The integration between the two tools allows not only to monitoring of therapeutic progress but also to exploration of the patient's resources, favoring a more conscious and profound path of change.

Therefore, the imagination is confirmed as a privileged channel for psychotherapeutic treatment, a powerful and transformative means that, overcoming defensive and rational barriers, allows one to face inner conflicts, explore the body and mind in an integrated way and promote psychological growth that translates into an enrichment of one's sense of self and one's potential. Through the continuous interaction between the material that emerged in the sessions and practical reflections on daily life, the patient is supported in the realization of a more conscious, balanced and integrated personality.

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2	Revista de Neurologia	Spain	Spanish
3	Revista Brasileria de Psiquiatria	Brazil	Eng.,Spani.,Portuguese
4	Arquivos de Neuro-psiquiatria	Brazil	Portuguese
5	Acta Psiquiatrica y psicologica de Amercia Laina	Argentina	Spanish
6	Journal of the Medical Association of Thailand	Thailand	English, Thai
7	British Journal of Psychiatry	UK	English
8	Acta Psychiatrica Scandinavica	Denmark	English
9	Salud Mentale	Mexico	Spanish
10	Vertex	Argentina	Spanish
11	Journal of Personality and Clinical Studies	India	English
12	Social Psychiatry and Psychiatric Epidemiology	Germany	English
13	Revista Medica de Chile	Chile	Spanish
14	South African Journal of Psychology	South Africa	Afrikaans, English
15	Psychological Reports	USA	English
16	South African Medical Journal	South Africa	Afrikaans, English
17	The Australian & New Zealand Jr. of Psychiatry	Australia	English
18	International Journal of Social Psychiatry	U. K.	English
19	Psychiatry Research	Ireland	English
20	Social Science & Medicine	U. K.	English
21	Revista De Saude Publica	Brazil	Portuguese
22	International Journal of Geriatric Psychiatry	U. K.	English
23	**SIS Journal of Projective Psychology and Mental Health**	**India**	**English**
24	Journal Brasilerio de Psiquiatria	Brazil	Portuguese
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