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## Arts-Based Assessments and Projective Tests: An Interpretation of Self

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Arts-Based Assessments and Projective Personality Tests:

An Interpretation of Self

Hannah Bailey, Noelle Giacona, & Angel Yang

Loyola Marymount University

Arts-Based Assessments and Projective Personality Tests:

An Interpretation of Self

by

Hannah Bailey, Noelle Giacona, & Angel Yang

A research paper presented to the

Faculty of the Department of  
Marital and Family Therapy  
Loyola Marymount University

In partial fulfillment of the  
requirements for the degree  
Master of Arts in Marital and Family Therapy

May 8, 2019

PROJECTIVE ASSESSMENTS

**Signature Page**

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**Abstract**

This research seeks to understand the relationship between arts-based assessments and perception of self through exploration of participants' interpretations of their own animal drawings. Subjects' experiences with projective tests, personality assessments and tools, and art assessments were also examined for contextual understanding and comparison. To conduct this mixed methods pilot study, a survey was administered to alumni of the Loyola Marymount University Marital and Family Therapy Department. The findings suggest evidence of self-projection within arts-based assessment interpretation by way of metaphor, and highlight the potential for interpretation bias in therapeutic assessment, both in administration and perception. This pilot study has provided foundational information for future research, and suggests the following to be considered for continued exploration: styles of interpretation, framework of questions, usefulness of assessments, consistency of assessment interpretation, and how demographics plays a role in each of these elements.

*Keywords:* personality assessment, projective test, arts-based assessment, standardized assessment, non-standardized assessment, interpretation, art therapy

**Disclaimer**

This paper does not reflect the views of Loyola Marymount University nor the Department of Marital and Family Therapy.

### **Dedication**

Hannah Bailey would like to dedicate this research to her family, for always keeping her grounded and rational; to Turner Barrowman, for his ongoing support, love, and understanding; and to their dog Effie, for all the kisses.

Noelle Giacona would like to dedicate this research to her family, for their continual support in both her educational and passionate endeavors, regardless of the path she pursues; to her friends, each whom have held her in their unique offerings and inspirations, their magic and motivations; and lastly, to her younger self - the dreamer and the believer - You did it.

Angel Yang would like to dedicate this research paper to her former art teacher and art therapist, Jaeyun Lee, for inspiring her to pursue a degree in Art Therapy; her friend, Moses Choi, for helping her navigate through the hardships of grad school and life; and to her sisters, for being supportive throughout the program.

### **Acknowledgments**

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They would also like to acknowledge each other - as research partners, peers, and friends - without whom this project would not have developed into such significance and taken three times as long to complete.



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## **Introduction**

### **The Study Topic**

This research seeks to understand personality assessments and, more specifically, how they relate to art therapy assessments and therapeutic interpretation. The study examines and categorizes how subjects interpret features of their own drawings as they relate to their personality, as well as how and why they use projective tests. Analysis and discussion of the data explores what these subjective interpretations could mean when used in therapeutic settings.

### **Significance of Study**

Art therapists use informal and formal art assessments based on projective drawings within their practice. The intention of this research is to gain an understanding of projective tests and how they are interpreted so that they can be used more effectively within a therapeutic space, as well as by the independent consumer.

### **Background of Study Topic**

Psychology and personality assessments have been studied and utilized throughout history as a means to understand, interpret, and explain human behavior. It is in their relationship where explanation exists, by way of overlapping the notion of psychological projection with the structure of assessment. A projective assessment or test is thus developed in attempts to organize and interpret what is both physically and subconsciously expressed.

Through investigation by multiple philosophers, psychologists, and scientists, personality assessments have evolved over time. Developments in principles, structure, and utilization allow personality tests to be helpful and applicable in many ways. They are now used for both recreational understanding and influential considerations, including but not limited to independent awareness of self, clinical diagnosis, employment selection, and legal domains. Not only are personality assessments used for various reasons but it has also become a \$400 million industry (Frazier, 2006).

A closer examination of current and past uses of projective assessments in popular culture depicts a societal trend of attempting to understand one's personality through broad categorization. The research has shown mixed results in finding correlation between personality traits and various non-standardized and popularized assessment results (Greasley, 2000; Boyce, 2002; Wu, 2005; Mardaga, 2006; Szobiova, 2008), but does depict an ongoing use of symbolic or metaphorical interpretation (Miller, 1997; Sysling, 2018). Such utilization of metaphor can be seen in methods such as graphology, Western Astrology, and the Enneagram, among others including arts-based assessments.

Research on the uses of personality assessments in various fields shows potential for their efficacy, while simultaneously revealing the need for further exploration of their limitations

(Mardaga, 2006; Szobiova, 2008; Zeigler-Hill, 2016). Current use of these tests may be beneficial for providing introspection and an interpretation of one's understanding of personality; however, their shortcomings should also be considered when used in a therapeutic or potentially consequential context such as legal circumstances (Miller, 1997; Matise, 2007; Bland, 2010; Tapp, 2010).

To address these shortcomings, existing research on the subject emphasizes the need for standardization procedures in both the implementation and interpretation of these assessments (Greasley, 2000; Bland, 2010). Yet the literature also conversely indicates that standardization of assessments is not reason enough to justify or inspire the use of these measurements in practice, particularly with regards to those used within the Art Therapy realm (Mills & Goodwin, 1991; Cohen, Mills, & Kijak, 1994). It is for these reasons that a more informed understanding of projective personality assessments is necessary, both from an administrative and participatory perspective.

## Literature Review

### Personality Assessments Throughout History

Throughout history, many people have researched and explained personality in different ways. Hippocrates (460 – c. 370 BC), a Greek physician, developed a medical treatment based on four body fluids, which he believed if were imbalanced would cause illness. His model was expanded to describe personality hundreds of years later by another Greek physician, Galen (129 AD – c. 200/c. 216). Galen believed having too much of one fluid dictated your personality, and he divided them into four temperaments: choleric, melancholic, sanguine and phlegmatic. The idea of temperaments continued to be in use at the dawn of psychology. In 1879, Wilhelm Wundt placed the four temperaments on an axis of emotional/nonemotional and changeable/unchangeable. The more emotional temperaments (melancholic and choleric) were divided from the less emotional (phlegmatic and sanguine). The second axis separated the changeable temperaments (choleric and sanguine), from the unchangeable (melancholic and phlegmatic). As modern medicine began to understand the function of bodily fluids, personality fell to the psychoanalyst. Carl Jung explained individuals through four fundamental ways of sensing, intuition, thinking, and feeling, Abraham Maslow explained people by their hierarchy of needs, and Sigmund Freud identified the three egos to explain personality (Frazier, 2006).

In *Clinical Personality Assessment: History, Evolution, Contemporary Models, and Practical Applications*, psychologist James N. Butcher (2009) discusses the history of personality assessment, beginning in 19th century England with Sir Francis Galton. Cousin to Charles Darwin, Galton created investigational procedures for measuring psychological attributes by conducting experiments. He was the first to examine which characteristics of self were due to nature and which were due to nurture. In 1931, American psychologist Robert



Bernreuter developed a personality scale that scored and appraised personality on the basis of an individual's levels of neurotic tendencies, ascendance-submission, and introversion-extraversion.

At the turn of the 21st century, ideas around personality continued to expand as they built off the findings of these notable previous theorists. One example is The Color Code, a personality assessment created by psychologist Dr. Taylor Hartman, who suggests that although the aforementioned psychologists and theorists defined and studied personality through a behavioral lens, they failed to look at motive. In The Color Code, Hartman asserts that identifying motive is the key to building self-awareness and emotional intelligence. The Color Codes determines personality based on motives, separated into the following categories: instincts/preferences, needs and wants, values, behavior, and character (Frazier, 2006).

**Types of tests and their uses.** When considering the diverse history of psychological personality theories, literature on the topic illuminates the predominant types of assessments that have been studied for particular uses and settings. One example of a modern personality test is the Minnesota Multiphasic Personality Inventory-Adolescent-Restructured Form (MMPI-A-RF), which is used to assess adolescent psychopathology and personality in clinical and forensic settings. According to Handel (2016), a faculty member of Eastern Virginia Medical School, the MMPI-A-RF is more efficient and shorter than the original MMPI-A. With 241-items compared to the original 478-items, the assessment is shorter in time and therefore reduces problems of attention and concentration, better allowing it to be used for clinical assessment in multiple settings. Similarly, the Apperceptive Personality Test (APT), a personality test that interprets subjects through questionnaires as well as subject-generated stories inspired by particular theme cards, was reviewed and explored for its clinical evaluation of clients. APT is a useful clinical

tool that expanded the psychodiagnostic methodology and was shown to be useful in the evaluation of two different clients in clinical cases (Silber, Karp, & Holmstrom, 1990).

Many academics have researched the correlation between personality assessments and mental disorder traits, illuminating the utility of personality assessments in clinical diagnosis. A few professionals from universities and hospitals created a study using the Personality Assessment Inventory (PAI), in attempts to measure pathological personality trait domains. Early results of PAI testing were found to be useful in assessing DSM-5 personality constructs; the research is still preliminary due to limitations in validity (Ruiz, Hopwood, Edens, Morey, & Cox, 2018). Likewise, researchers at the University of West Florida surveyed members of an association called the Society for Personality Assessment, discovering that personality assessments were mainly used for diagnostic purposes and as an indicator for type of therapy, which was found to be helpful in therapeutic effectiveness of practitioners (Piotrowski, Sherry, & Keller, 1985).

In addition to clinical applications, personality assessments are often used in employment hiring processes or to determine if an individual is fit for a position in an industry. For example, researchers at the Department of Psychiatry and Behavioral Sciences of Vanderbilt University, found that protocol established in their study of 371 physicians was valid and useful in determining physicians unfit to practice when evaluating “fitness-for-duty” based on the PAI (Brown, Iannelli, & Marganoff, 2017). Brown et al. (2017) determined the study was interpretively useful in discerning multiple factors used to define and establish “fitness-for-duty,” such as levels of anxiety, depression, and problematic thoughts during heightened stress levels. However, this study was limited by the existence of outliers in the data and did not take into consideration that stress as measured on the PAI is not a top predictor of problem behaviors

in the Roberts et al. (2004) study or in the Lowmaster and Morey (2012) study, both of which examined law enforcement problematic behavior and the PAI (Brown et al., 2017). Similarly, researchers, Moyle and Hackston (2018) reviewed how personality assessments are used for employee selection and development, which has revealed that many assessments have been misused and misguided. The literature review by Moyle and Hackston (2018) also concluded that there is lack of research on assessments for employment development and stated a need for them. According to Moyle and Hackston (2018), most assessments are used for employee selection, with Myers-Brigg being the most popular. Moyle and Hackston (2018) further discuss the lack of reliability and validity of the MBTI. “The MBTI Step I questionnaire sets out to capture an individual’s underlying preference, but their behavior will also relate to their current situation and past environmental influences” (Moyle and Hackston, 2018, p. 509).

Personality assessment instruments have also been resourced in police psychology - the application of psychological services in law enforcement - for multiple reasons since the 1960s. “Psychologists provide a variety of services to law enforcement agencies, including performing evaluations for pre-employment selection, fitness-for-duty evaluations (FFDE), and counseling/treatment for psychologically troubled officers and first responders” (Weiss and Inwald, 2018, p. 189). Personality assessments are further utilized with law enforcement officers by assessing the level of psychological distress and personality characteristics that could interfere with their work: “Officers reported overall that psychological distress correlated with higher levels of critical incident exposure and life stressors” (de Blanc, 2017, p. v).

Additionally, the following research has utilized assessment tools to explore the correlation between violence, aggression, and other common traits involved in criminal behavior. A study by Edens et al. (2018) looked at the Personality Assessment Screener (PAS), a five-

minute 22-item self-report questionnaire intended to measure possible risk for a range of emotional and behavioral psychopathology (PAI; Morey, 1991, 2007 as cited in Edens et al., 2018). The study was conducted to measure the risk for emotional and behavioral dysfunction across three archival criminal justice samples. Findings assert “the Personality Assessment Screener (PAS) total score effectively identified those with clinically significant elevations on the PAI and also significantly correlated with various criterion measures tapping psychological dysfunction” (p. 1). Similarly, in a study by Roche et al. (2017), the use of the indexes, Violence and Aggression Risk Index (VARI) and Violence Potential Index (VPI) within the Personal Assessment Inventory (PAI) indicated correlations to violence risk when used together. However, the study is limited by a number of factors such as the sample pool not including high risk offenders, the uncertainty of VARI translating to other clinical settings, and biases in self-reporting. Conversely, a study by Reidy, Sorensen, & Davidson (2016) supports the validity of PAI among a large sample of imprisoned offenders to determine institutional misbehavior. Lastly, an investigation conducted by Kelley, Edens, & Douglas (2018) sought to determine the validity of a PAS as it related to significant elevations on the PAI and other indicators of symptomatology and dysfunction in a large mixed-gender offender sample. Findings support that the use of PAS can be limited in forensic and correctional settings but can be used to evaluate the potential need for further assistance in inmates (Kelley et al., 2018).

### **Psychological Assessments**

This section of the literature review will address the available research related to psychological assessments, particularly those that assess personality within the art therapy realm of psychology. The discussion will begin with an overview of standardization within art therapy assessments, then review correlational studies which seek to test reliability and validity within

both standardized and non-standardized assessments. Lastly, this section will acknowledge what psychological assessments are actually being used within the field of art therapy. Critiques of these methods will be included, addressing their validity as well as potential options for consideration in their future utilization within the field.

**Standardization in assessments.** Literature on art therapy assessments outlines the technical administration of these tests, encouraging the importance and necessity of standardization. According to Millman and Greene (1993), standardization of assessments creates structured procedures so that those administering the test maintain uniformity throughout the observation, administration, equipment, materials, and scoring. Older texts in the literature appear to detail the structures of standardization. Cicchetti (1994) elaborates on how to achieve standardization within assessments by detailing the need for “systemic stratification,” on multiple variables in order for the standardization of any test of intelligence (p. 284).

Research provides assistance for clinicians in choosing appropriate instruments for psychological assessments by offering them guidelines, criteria, and rules for consideration. These elements culminate in detailed administration manuals for art therapy assessments, often in textbooks or articles related to research and its application, emphasizing the availability and accessibility of standardized assessments (Handler, 2014). Amongst the standardized art assessments is The Formal Elements Art Therapy Scale (FEATS) and the Diagnostic Drawing Series (DDS), both supported by extensive research (Cohen, Mills, & Kijak, 1994). The FEATS is considered a representation of “some of the very best research” in the field, whose 14 scales of measurement are available in manual form and applicable globally (Gantt & Anderson, 2011; Gantt & Tabone, 1998). Case materials and methods of use are often provided with these instructions as a means of technique elaboration and exploration.

Despite literature on the importance, necessity, and instruction of standardized methods, research reveals that many art therapy assessment techniques are not standardized and reflect inconsistencies in reliability and validity. In a pilot study, Mattson (2011) suggests that a lack of standardization in elements of FEATS, such as rotational tilt objects, might be affected by human error in rating. He goes on to suggest that human-computer based rating tools may be more consistent in agreement than humans alone (p.123); however, studies of inter-rater reliability within the Bird's Nest Drawing assessment revealed moderate to good levels of agreement with human raters (Harmon-Walker & Kaiser, 2015). Furthermore, discrepancies in standardization elements such as reliability and validity do not appear to deter the use of such assessments in efforts to develop distinguishing features between population groups.

**Effectiveness of assessments.** Current research examining the application and effectiveness of non-standardized art therapy assessments include diagnostic, correlational, and comparative elements. These studies are often conducted on one population, though their findings suggest future generalizability. For example, the Person Picking an Apple from Tree (PPAT), the Face Stimulus Assessment (FSA), and Structured Mandala Coloring (SMC) were found to be marginally satisfactory in estimating the level of dementia in Korean psychiatric patients (Kim, Kang, Chung, & Hong, 2012). However, the regression model developed for this study can be used to “compare any kind of art therapy tool” in estimating levels of any psychological disorder (p. 402). The PPAT, shown to be most effective in the aforementioned study, has also been shown to be consistent in distinguishing individuals with particular features of depression (Eytan & Elkis-Abuhoff, 2013). Pénczes et al (2015) found additional evidence that shows how a client's interaction with the art materials can illuminate elements of their mental health. Certain art assessments have developed thematic reliability, such as Goldner's multiple

studies exploring the Birds Nest Drawing and facets of security (Goldner, 2014; Goldner, Gazit, & Scharf, 2017). Standardized art assessments were unique in their use within comparative studies, revealing statistically significant results for both the DDS and FEATS assessments (Ritnour et al, 2015; Teneycke, Hoshino, & Sharpe, 2009). It is worth noting that all studies reviewed in this section were conducted within the last 10 years, from 2009 to 2018.

**Current and future use of arts-based assessments.** Yet the literature indicates that standardization of assessments is not reason enough to justify the use of these measurements in practice. In a survey of almost 600 marital and family therapists, no single standardized assessment was used by more than 8% of the sample (Boughner, Hayes, Bubenzer & West, 1994). An informal study of assessment use in child art therapy conducted in 1991 surveyed graduate students/master's art therapists to conclude that, rather than using published tools, respondents at all levels chose to modify existing techniques and create their own (Mills & Goodwin). Despite the age of these studies, literature on the topic continues to support this notion throughout time. In 1994, Cohen, Mills, and Kijak identified familiarity as the primary influencing factor in a clinician's choice of assessment technique. Research does suggest it is possible to increase utilization of standardized assessment instruments by way of familiarity, with "positive attitudes, training, and work setting" being identified as the best predictors of their application amongst marriage and family therapists (Lavee & Avisar, 2006).

Research illuminates the complexities of how to best move forward with assessment use within art therapy, acknowledging both the needs of the practice and areas for improvement. Betts (2006) alludes that an awareness of both personal preference and standardization are beneficial, suggesting that an integration of objective and subjective measures is the most effective approach to assessment in art therapy. This notion holds historic support with Mills and

Goodwin (1991) also finding that combined art therapy techniques, including those made of multiple independently standardized assessments, were perceived as most beneficial by participating art therapists. It is suggested then that art therapists study and be aware of problems related to the merits of formal versus informal art therapy assessments so as to have freedom in developing their own art-based assessment that still meet psychometric requirements (Gantt, 2004).

While the perception seems that flexible practices can be effective within particular realms of therapeutic applications, a lack of standardization may diminish assessment credibility when interacting with other fields. Forensic art therapy, for example, is primarily tasked with gathering information to assist with legal determinations and must therefore adhere to forensically governed standards throughout its facilitation to maintain its credibility (Gussak & Cohen-Liebman, 2001). No credible information could be found on whether or what types of art therapy would be respected in a court of law outside of forensic art therapy. The existing body of literature ultimately highlights the value in consideration of an assessments purpose when discerning the need, role, and efficacy of standardization.

Current research also indicates a growing integration of technological methods in art therapy, suggesting resolution to concerns of validity and reliability in art-based assessments. Donald Mattson (2011) proposes using public domain image analysis software (PDIAS) programs to complement subjective scoring of assessments, indicating their “near-exact percentages and dimensions of formal [art] elements” as a means to improve inter-rater reliability (p. 208). In alignment with this suggestion, a Korean study developed and applied a computer system to objectively rate formal art elements of a structured mandala assessment, finding a high correlation between human and system ratings (Kim et al, 2009). It did not,



however, estimate levels of psychological disorder, echoing Betts (2006) sentiments that a combination of subjective and objective assessment may be most effective for assessment, and particularly diagnostic purposes.

### **Assessments of Popular Culture**

**Linking personality and emotion.** Current research on assessment in popular culture depicts a desire to discover a connection between personality and emotion. Szobiova (2008) identifies connections between birth-order within a sibling constellation and the personality traits of adolescents, specifically creativity. Szobiova's findings "lend support to the idea that birth order and sibling constellation play an important role in affecting the creativity (especially of second-born adolescents and women) and personality characteristics (especially agreeableness and conscientiousness)" (p. 380). Additionally, Mardaga, Laloyaux, and Hansenne's (2006) research on emotional reactivity speculates that temperaments probably act on the unconscious emotional processing rather than the conscious one. Their present study supports the idea that "Personality traits can modulate the emotional reactivity generated by pictures with different affective valences... the study supports and extends the associations between personality and emotion" (p. 1612). Zeigler-Hill (2016) researched the connection between personality and humor style, and suggested a direct correlation between humor style and personality, stating: "Individuals with pathological personality traits tend to employ humor styles that are harmful to themselves and others and avoid using benign forms of humor that may enhance either themselves or their connections to others" (p. 372). Meaning humans utilize humor as a way to deflect and separate as well as bond, which often correlates with personality traits. This suggestion supports meta-analysis findings on humor and personality traits such as findings by

Mendiburo (2015), which depict a strong correlation between Big 5 personality traits and style of humor.

This need for a deeper understanding of personality goes farther than even its emotional expression, and often results in combinations of assessments. According to research by Miller (1997), popular Japanese personality test Ketsueki-gata holds that blood type can help determine a person's personality, a system that has been adapted in recent years to be combined with western astrology in creating 48 personality types. Similarly, Miller found that the elements utilized in western zodiac - Air, Earth, Fire, and Water - are often combined with blood type to create 16 personality types, and commonly cross-referenced in popular magazines to depict potential love matches. However, more recent research has shown no significant relationship between blood type and the Big 5 (Wu, 2005).

Additionally, research examining phrenology and graphology depict weak and often mixed results connecting personality and behavior (Lorch, 2006; Dazzi, 2006). Findings suggest that the least reliable approach was graphological while the least valid was the astrological. Similarly, the use of astrology in social work, as researched by Green (1979), confirmed the likelihood of populations in choosing their appropriate astrological personality traits, again suggesting prediction of performance or behavior. Through research conducted by Yvonne Smith Klitsner exploring “the process of mutuality from a Jungian perspective” (Klitsner, 2015, p. 26) comparing astrological charts of therapist and client, astrology has shown to provide therapist and client with parallels and “suggests that the Jungian concept of individuation, becoming the self one is meant to be, can be extended to the therapy relationship itself” (Klitsner, 2015, p. 36).

However, studies also assert that “while graphology continues to be founded upon... principles of analogical, symbolic, and metaphorical interpretations, rather than the results of

controlled empirical studies which systematically correlate specific features of the script with particular personality traits, the method may continue to be popular but have little validity” (Greasley, 2000, p. 48). In testing the Barnum Effect, a phenomenon which occurs when individuals believe that generic descriptions of personality apply specifically to them, among psychology undergraduate students, Boyce (2002) found that students positive perceptions of graphology increased after receiving the personality profile, but then declined after being debriefed, in contrast to their perceptions of legitimate sciences which did not change significantly. Sysling’s (2018) study of the history and popularity of phrenology noted that advocates of the technique used paper phrenological charts to reach a larger middle-class public. Furthermore, the combination of science and persuasion allowed phrenologists to provide clients with personal data to be used for further self-reflection and self-development, which allowed “consumers of phrenology... to internalize the principles of phrenology and learn how to see themselves in relation to others. Thus the charts provided not only the conceptual basis and the language but also the practical tools for self-knowledge” (p. 280).

Miller’s research on popular personality tests in Japanese Women’s magazines (1997), postulated that personality typologies exist as one method for women to face the anxiety related to complex decisions in their lives. The use of the Enneagram in therapy, as asserted by Matisse (2007), may assist in “conceptualizing clients and their issues while developing the therapeutic relationship and aiding interested clients in their growth” (p. 53). This is similar to the empowerment and self-reflection of phrenology as a tool for self-growth according to Sysling (2018), who asserted, “by learning how to do science, individuals were encouraged to internalize the idea that they had knowable selves and that they could be the experts upon them” (p. 280). The Ayurvedic practice echoes the importance of the knowable self in the conception of mental

health through harmony between self and environment with consideration of biological and social influences (Kumar, 2014). Bland asserts that use of Enneagram assists individuals in their ability to identify and transcend the strengths and limitations of their value systems and work toward an integrated worldview conducive to others' growth (2010). As a counseling tool, research has demonstrated the effectiveness of the Enneagram (Matisse, 2007), as well as a need for "contemporary counseling and psychology researchers [to] review and refine existing standardized scales... to better promote its exposure and incorporation into these fields" (Bland, 2010, p. 26). Finally, research depicts clinical use of non-standardized tools, such as the Enneagram, during the therapeutic process as helpful in the facilitation of client insight, providing "clients and counselors a common language with which to discuss problems" (Tapp, 2010, p. 71).

### **Conclusion**

This literature review recounts the historical development and implementation of personality tests and assessments in a multitude of settings, including clinical and modern uses. The standardization and use of assessments have played a pivotal role in adapting the Art Therapy field for recognition as a reputable science, and is often at odds with the more projective based therapeutic interventions. Continued use of personality tests and assessments in an Art Therapy and clinical setting depicts a need for considerations in interpretation, recognition of personal bias, and an overall understanding of limitations of use. Similarly, while the use of non-standardized assessments in a clinical setting may provide benefits toward building rapport and identifying client perspectives of self, application of these tools still requires ongoing clarification and communication between client and clinician, as these interpretations may not reflect consistent external reliability.

### **Research Approach**

This pilot study used a mixed methods approach to collect data through an arts-based survey created by the researchers. Following consent for participation and demographic questioning, participants were asked to “draw an animal” and answer subsequent close-ended questions describing various features of the animal. Subjects were also provided an open-ended opportunity to explain how they interpret each of these features as they may relate to their personality. The survey concluded with questions examining perceptions and use of personality assessments. Mixed methodology was utilized with the goal to neither replace qualitative or quantitative approaches, but rather “to draw from the strengths and minimize the weaknesses of both” in a single research study (Johnson & Onwuegbuzie, 2004).

Qualitative research was incorporated through the art directive, creating a collection of projective drawings submitted by subjects via online resources. The imagery, paired with open-ended response questions, provided a means to gather information on their view of self. Additionally, qualitative data was derived through researcher interpretation and categorization of subject responses, to better understand the sample pool. Use of qualitative research provides the opportunity for researchers to make sense of the participants’ experiences, thus offering insights into their personal and social world, which can in turn be generalized (Smith, 2004).

Quantitative data was produced through acknowledgement and comparison of subject demographics and reported use of arts-based assessments and personality tests. These results inform the literature and may determine how test results can affect individual’s perceptions of both personality assessments as well as themselves. This notion applies both for independent users and, perhaps more importantly, therapeutically interpreted interventions. Using a mixed methods research approach allowed for “a more complete understanding of [the] research

problem” than qualitative or quantitative alone (Crewswell, 2014), thus offering a deeper level of inquiry towards the research objective.

## Methods

### Definition of Terms

Arts-based assessment - Defined by the research team as any test that utilizes art materials and products in its administration.

Relational interpretation - Defined by the research team in the coding of this research as any metaphorical open-ended response that focused on external relational experiences.

Internal interpretation - Defined by the research team in the coding of this research as any metaphorical open-ended response that focused on inner experiences.

Metaphorical interpretation - Defined by the research team in the coding of this research as any figurative open-ended response that projected individual personality traits onto animal characteristics. This category was then separated into relational and internal sub-categories as they relate to the perceived use/context of the metaphor.

No interpretation - Defined by the research team in the coding of this research as any open-ended response that did not utilize either pragmatic perspective or use of metaphor in the interpretation of animal characteristics and personality traits.

Non-standardized assessment - Defined by the research team as a non-empirically designed evaluation whose methods of administration and scoring are not controlled, but are instead adjusted for individual use and may consider culture, bias, and other environmental factors.

Personality assessment - Defined by the research team as any test whose purpose is to describe an individual's trait characteristics in quantitative and/or qualitative terms.

Pragmatic interpretation - Defined by the research team in the coding of this research as a realistic interpretation of animal characteristics with no aspects of personality considered in the meaning.

Projective test - Defined by the research team as a psychological test whereby the subject is asked to respond to ambiguous material that is then analyzed for unconscious material, which is thought to reveal the subject's personality.

Standardized assessment - Defined by the research team as a test that has been developed empirically and is evidenced to be of reasonable reliability and validity through controlled and systematic methods of administration and scoring.

### **Design of Study**

This pilot study was approved by the Loyola Marymount University Institutional Review Board (Appendix A). It is a mixed methods inquiry examining how subjects use personality assessments and interpret features of their art as it relates to their personality. The study gathered data on demographics of the subject pool, followed by an art component asking subjects to “draw an animal” using standard 8.5 x 11” printer paper and a black or blue pen. Subjects were then asked to complete an online Qualtrics survey composed of close-ended multiple choice questions coding animal drawing characteristics, and open-ended response questions allowing for personal interpretation of those characteristics (Appendix B).

**Sampling.** Researchers sourced subjects through Loyola Marymount University alumni associations. Subjects were contacted by researchers via email through their respective departments, and distributed a Qualtrics survey link. The sample was composed of 26 alumni from LMU’s Marital and Family/Art Therapy department.



**Gathering of data.** Researchers used Qualtrics online survey system as a secure portal for data retrieval. A demographic survey was administered, which included art therapy experience, education levels, occupation, ethnic identity, gender, and age. Subjects were then provided with one non-standardized, arts-based assessment to “Draw an animal.” All participants were asked to identify descriptors of various elements in their drawing, as well as to provide personal interpretations of how they believe these features relate to their personality. Participants were then surveyed on both their personal and professional use of projective tests.

**Analysis of data.** Data was analyzed using a coding systems developed by the research team. The system utilized keywords and phrases from open-ended subject responses related to personality interpretation as a means to categorize the participants’ analyses into the following categories: no interpretation, pragmatic interpretation, and metaphorical interpretations. Metaphorical interpretations were then subdivided into internal and relational based on the context of the metaphorical underpinnings. Researchers also identified keywords and phrases to extract thematic categories from open-ended rationales related to personality assessment use and experience. Data was further analyzed through cross-comparisons of both quantitative and qualitative results.

## Results

### Presentation of Data

Twenty-six individuals consented to participating in this research survey, of which 19 participated and 15 completed the questionnaire in full. 100% of subjects reported being a practicing art therapist, all of whom hold at least a graduate level degree (Figure 4). Quantitative data is presented below in the respective order of the survey, including close-ended responses to questions of demographics, subject interpretations of categorical features of their own drawing, and experiences with projective tests. The presentation of qualitative data includes charts depicting researcher-interpreted coding of subjects' written responses, subject's use of art assessments in a clinical setting compared to benefits, and subjects' written responses by age.

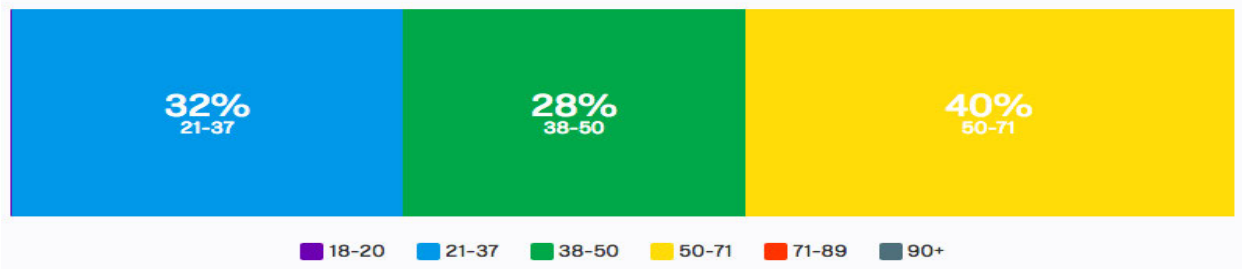


Figure 1: How old are you?

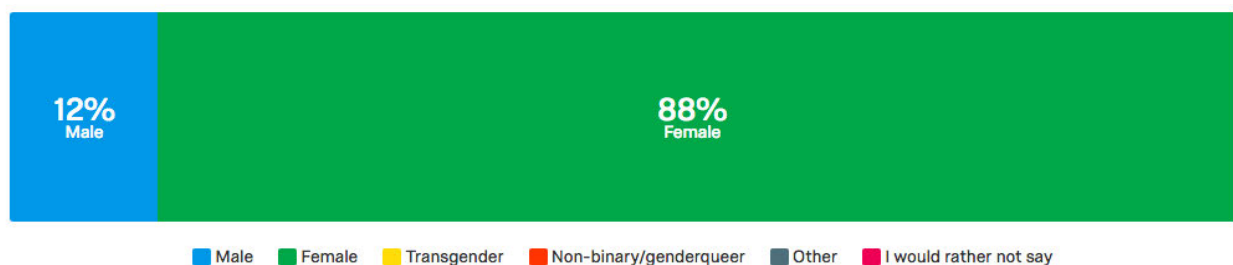


Figure 2: What gender do you most identify with?

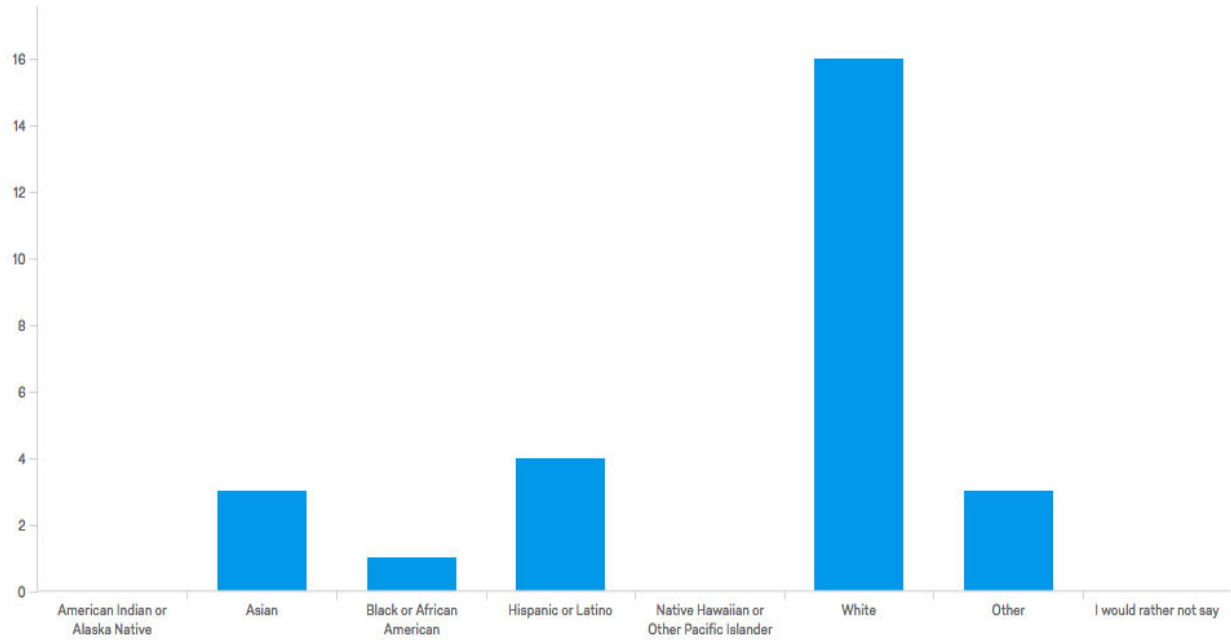


Figure 3: What ethnic group do you identify with?

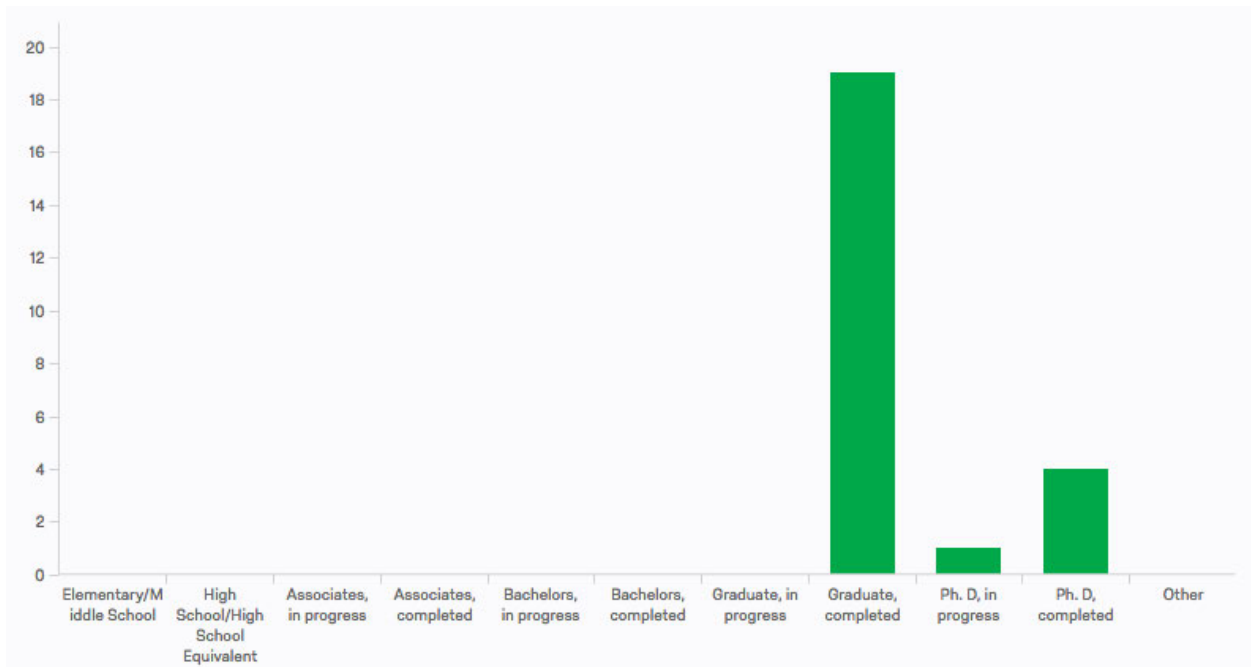


Figure 4: What is your highest level of education achieved?

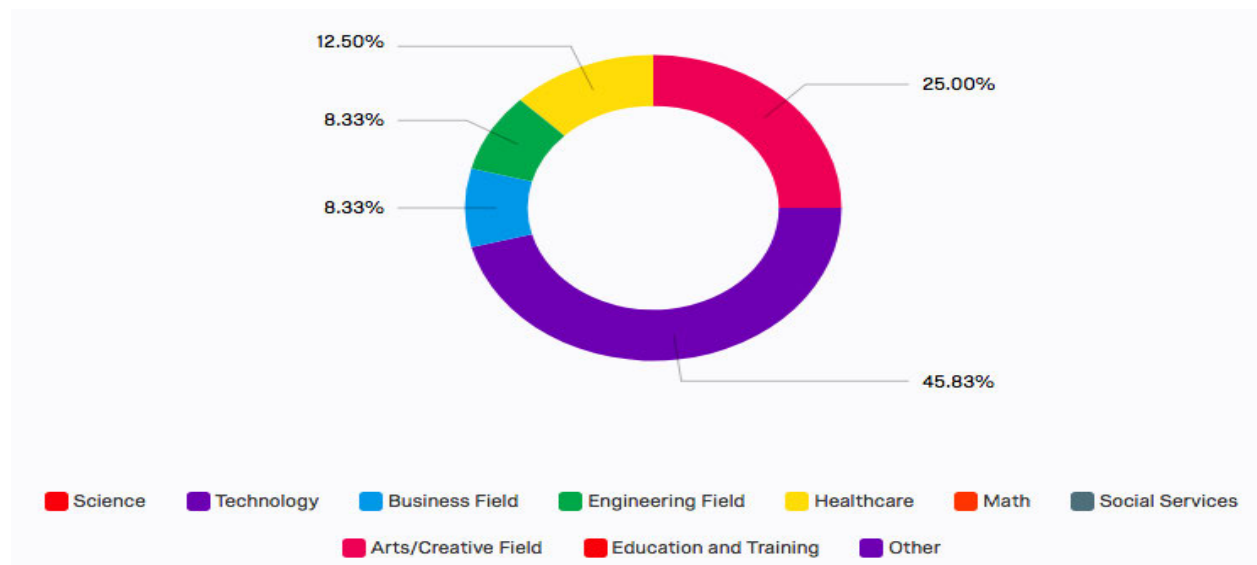


Figure 5: How would you best describe your occupation?

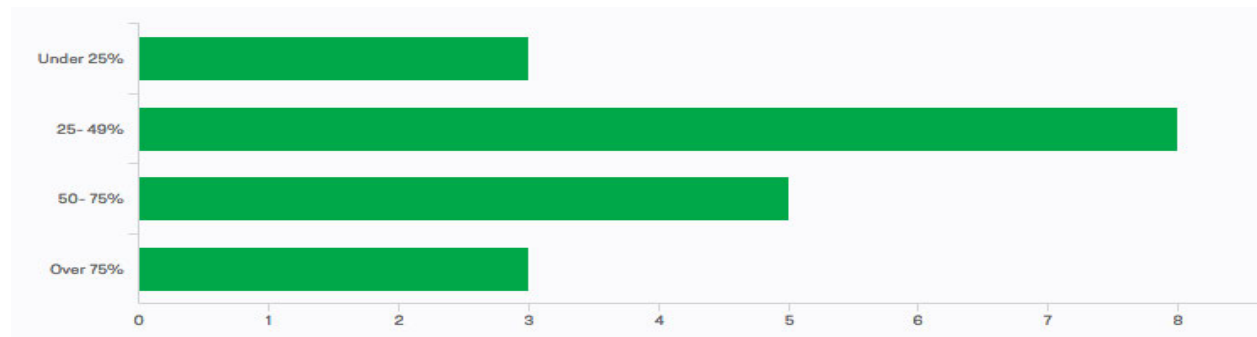


Figure 6: Which of the following best describes the amount of space your animal takes on the paper?

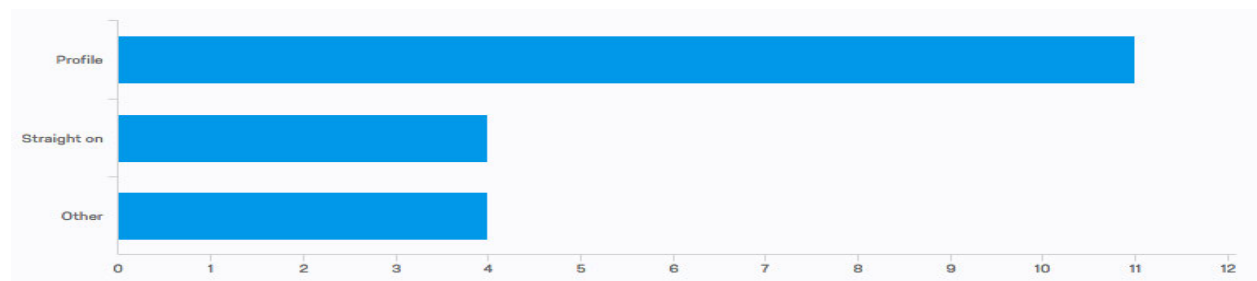


Figure 7: Which of the following best describes the orientation of your animal?

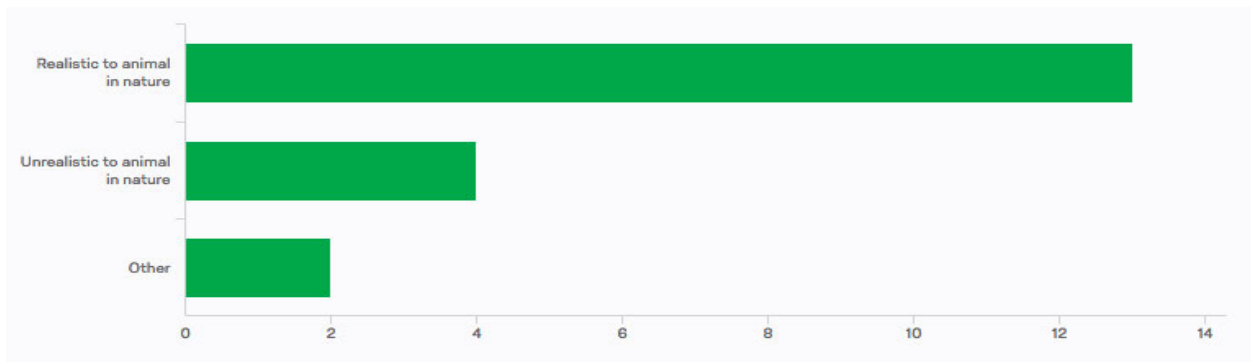


Figure 8: Which of the following best describes the body position of your animal?

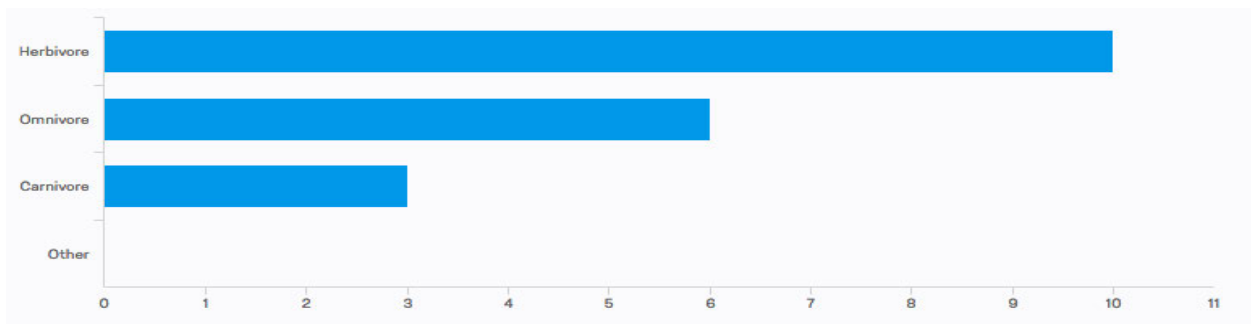


Figure 9: What are the eating habits of your animal?

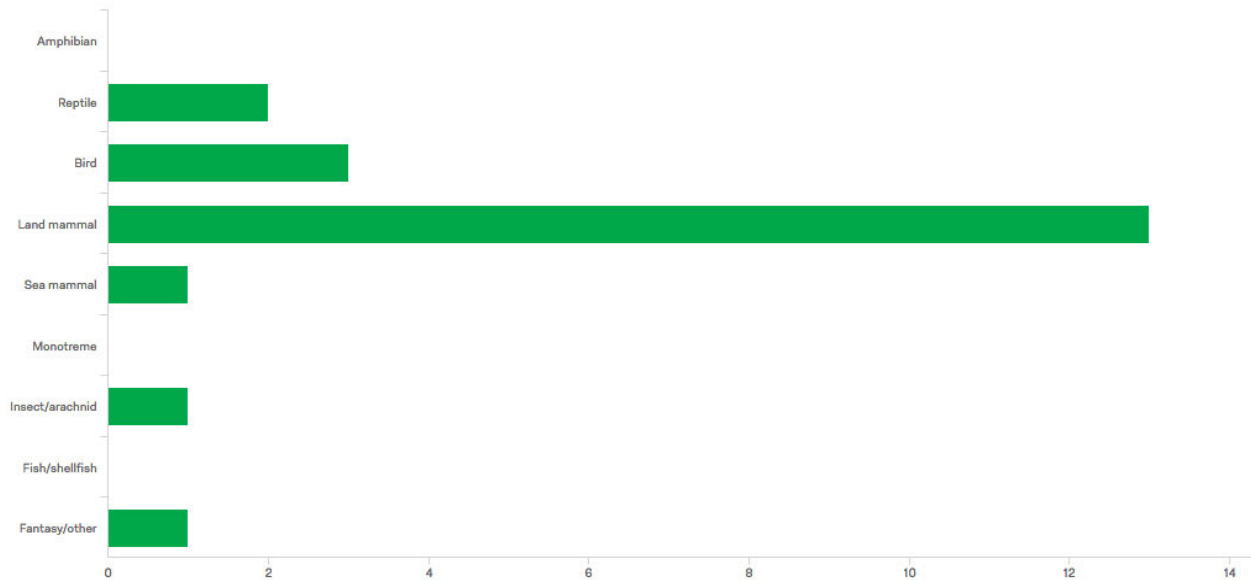


Figure 10: Which of these categories best describes your animal?

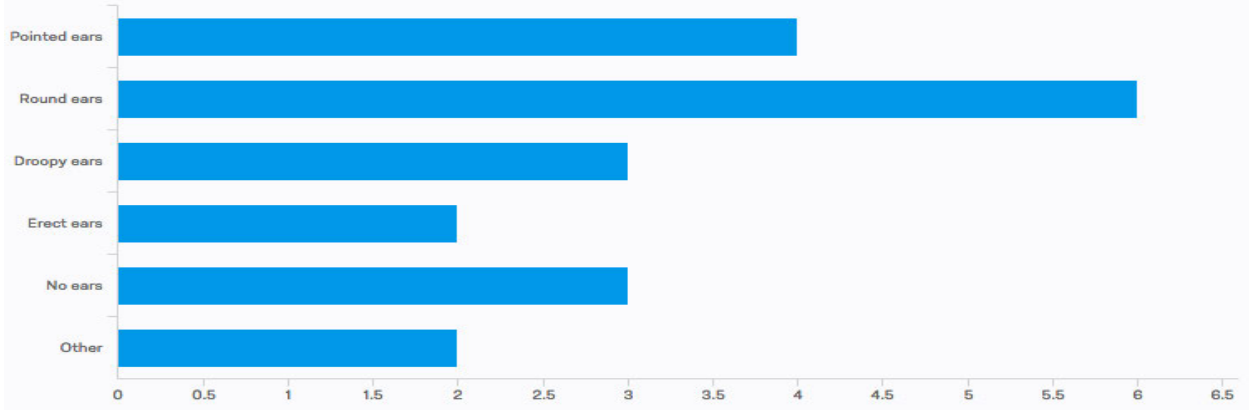


Figure 11: Which of the following best describes the ears of your animal?

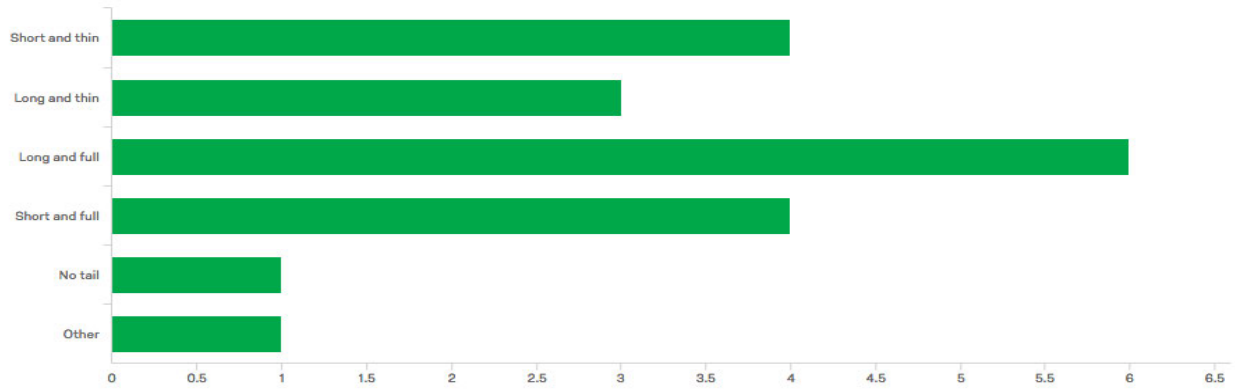


Figure 12: Which of the following best describes the tail of your animal?

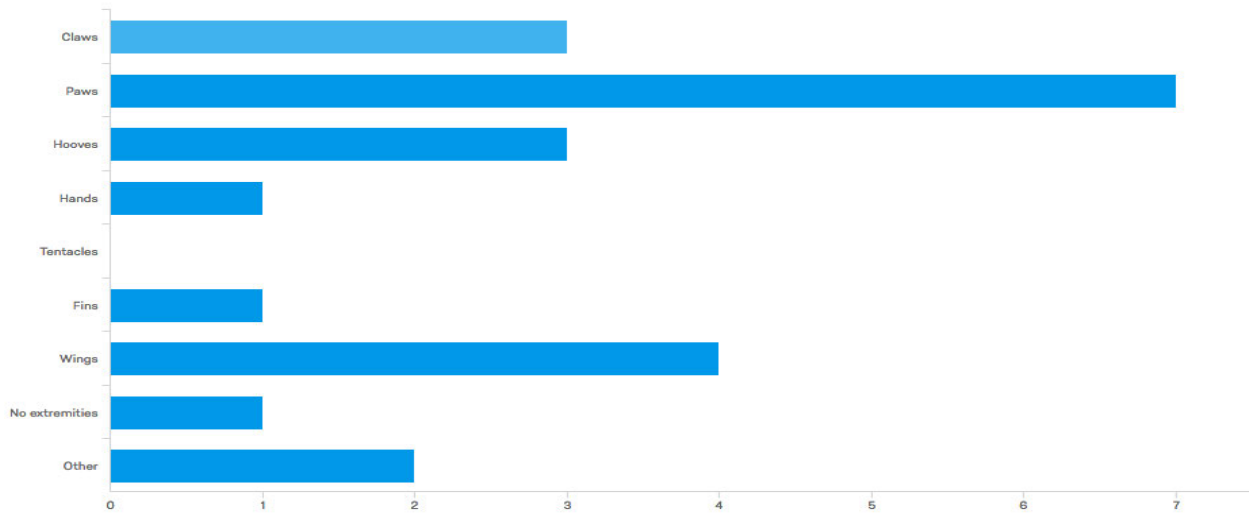


Figure 13: Which of the following best describes the extremities of your animal?



Figure 14: Did you place your animal in an environment?



Figure 15: If yes, which of the following best describes the environment you created?

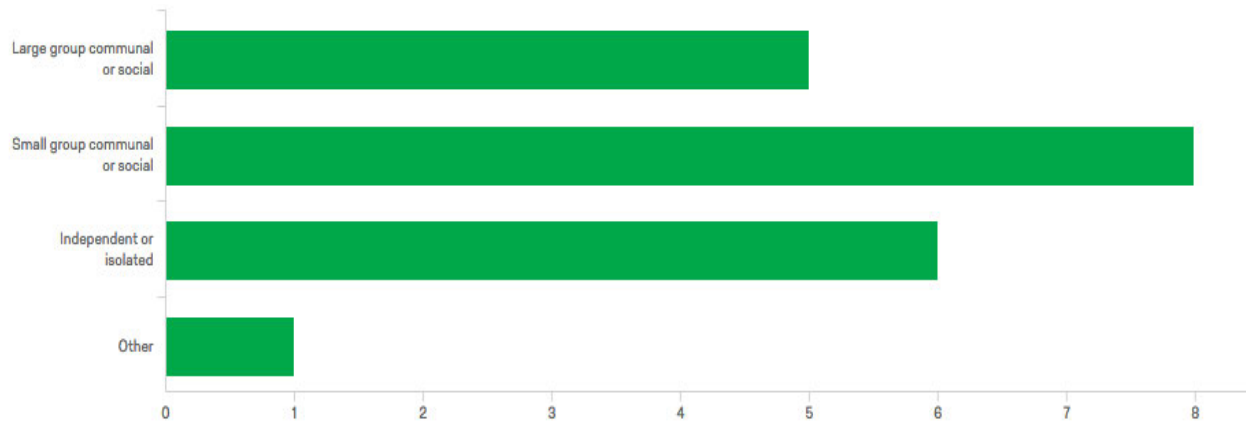


Figure 16: Which of the following best describes the social relations of the animal?

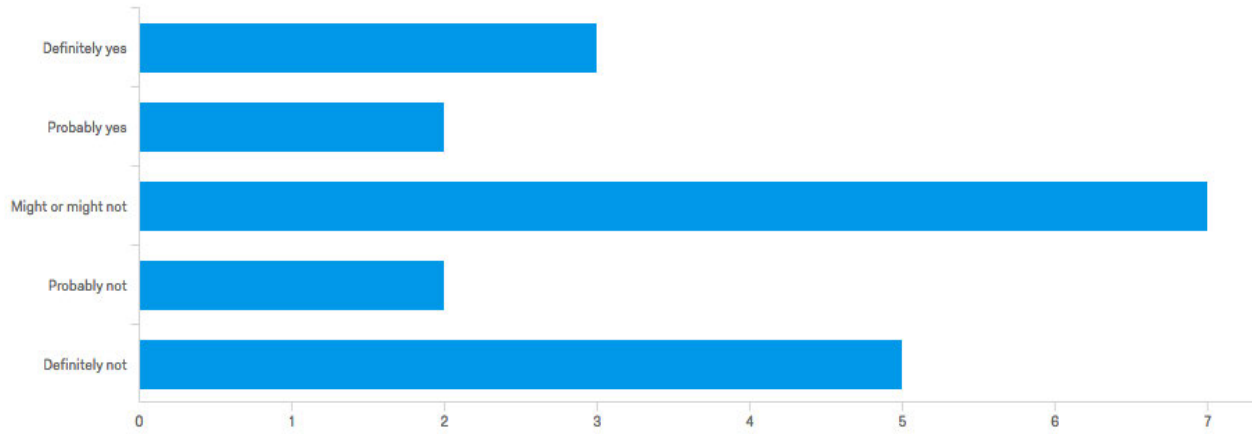


Figure 17: Is the animal you drew engaging in an activity?

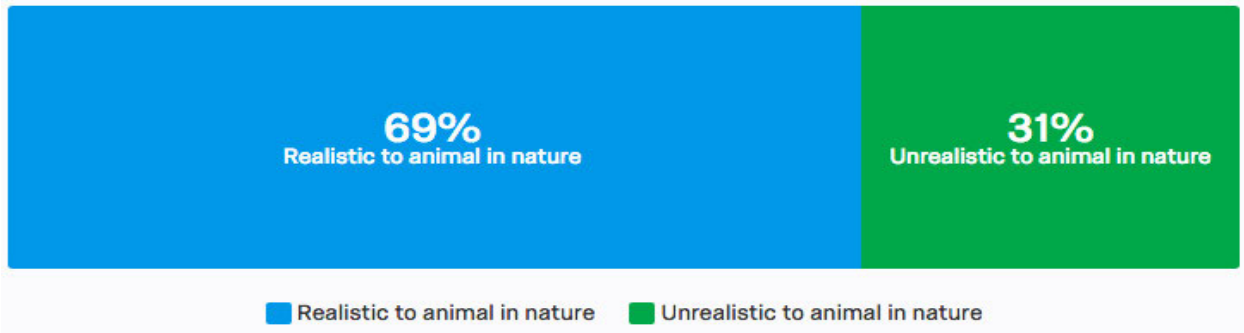


Figure 18: Which of the following best describes the type of activity your animal is engaged in?

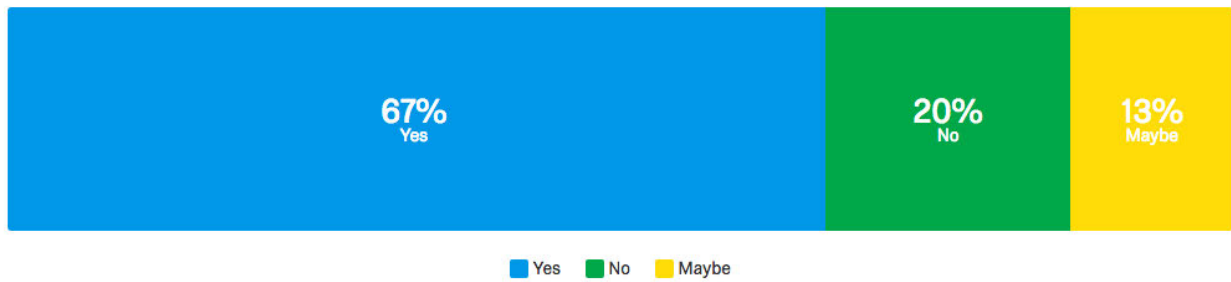


Figure 19: Have you ever taken a projective test?



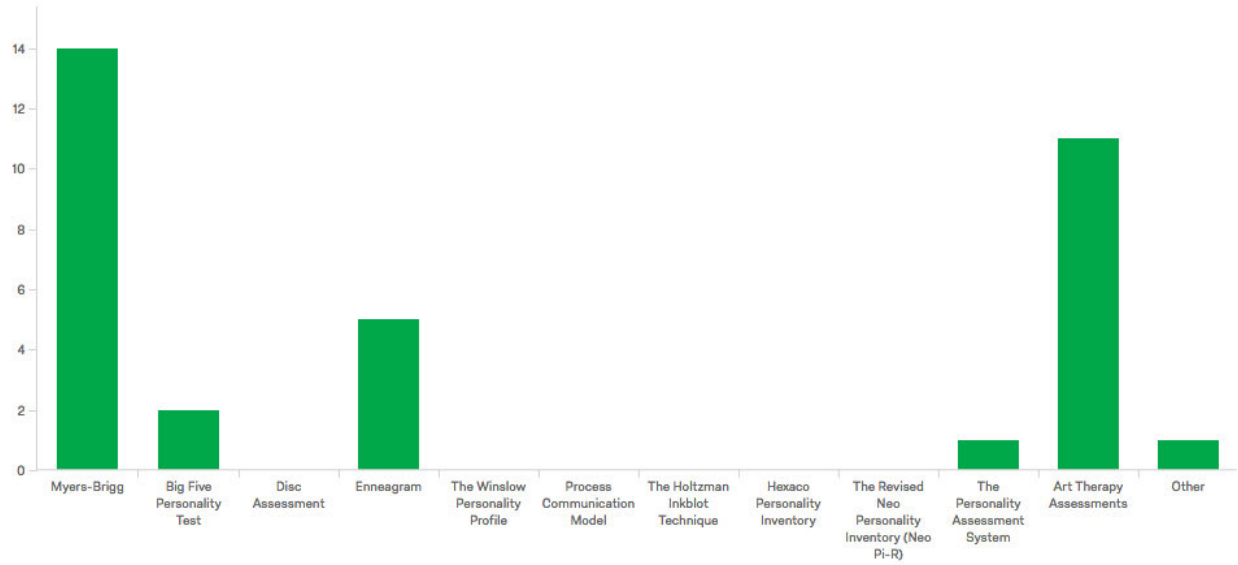


Figure 20: What kinds of personality tests have you taken?

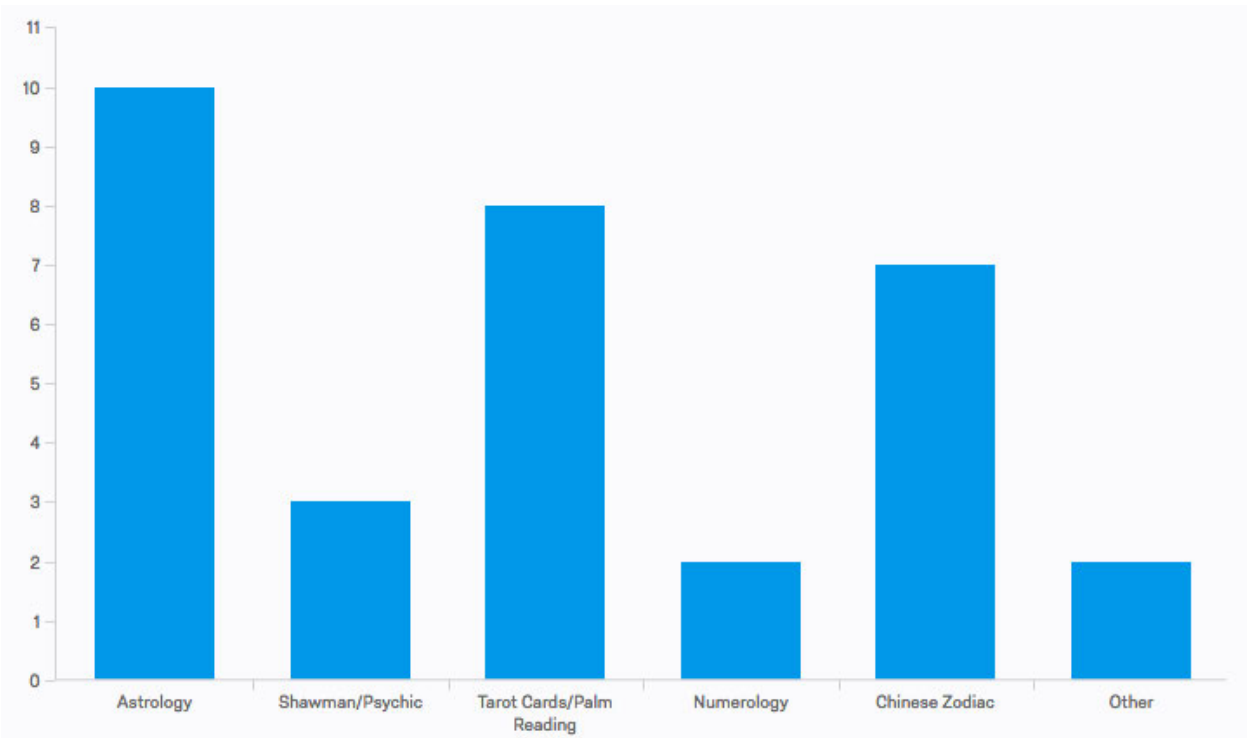


Figure 21: What other tools have you used to understand your personality?

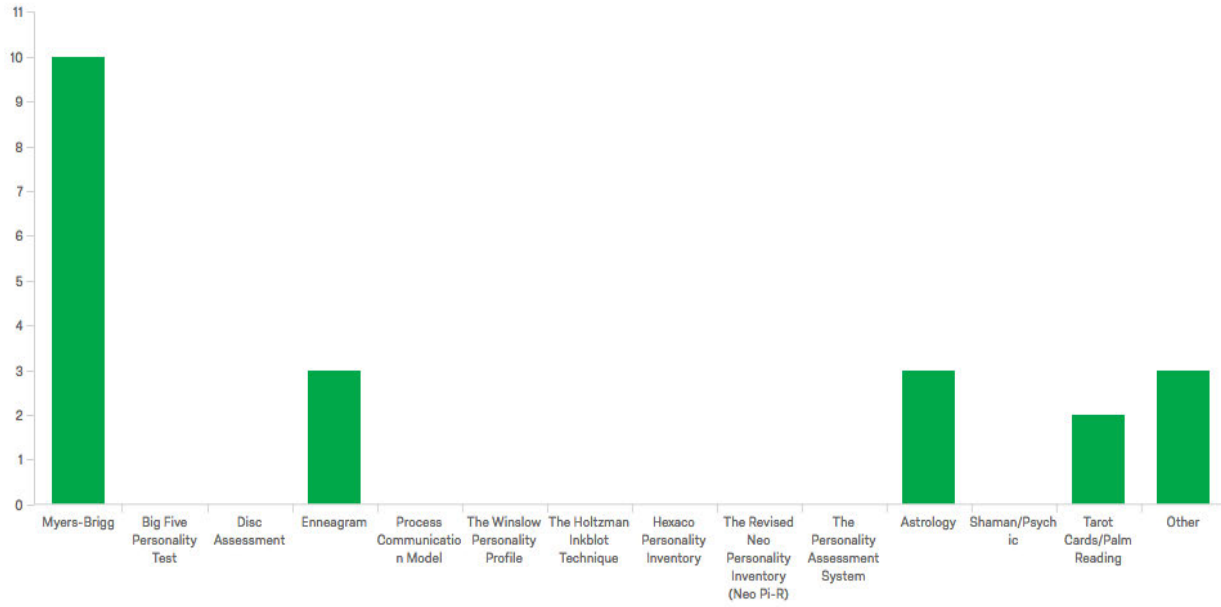


Figure 22: Which personality tools or tests were most accurate to your personality?

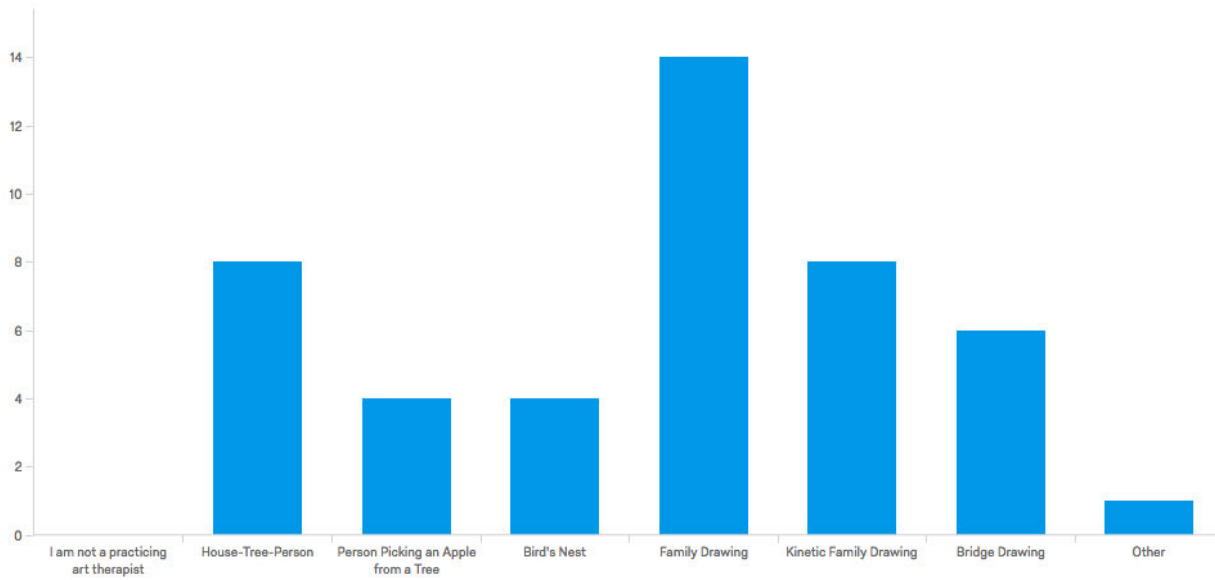


Figure 23: If a practicing art therapist, which projective art assessments have you used with clients?

The following section of charts report researcher-interpreted categorizations of open-ended survey responses. Open-ended questions offered subjects space to connect and interpret specific features of the animal drawn to their personality.

Survey Question Number (in order of survey)	Total number of completed responses	No Interpretation	Pragmatic Interpretation	Metaphorical Interpretation	Internal Metaphorical	Relational Metaphorical	Incomplete or No Response
90	19	2	5	12	6	6	0
57	18	3	4	11	7	4	1
59	15	3	1	11	10	1	4
85	17	4	2	11	9	2	2
52	17	4	2	11	6	5	3
51	16	4	0	12	2	10	3
44	14	4	2	8	6	2	4
54	16	3	0	13	10	3	3
55	13	1	2	10	7	3	5
63	17	3	1	13	0	13	2
61	14	2	0	12	10	2	5

Figure 24: Relation of interpretation to personality

AGE GROUP	Total Response (%)				Difference = Total - N/A
	No Interpretation	Pragmatic	Metaphorical	N/A	
21-37	0 (0)	8 (15.09%)	44 (83.01%)	14	53
38-50	15 (30%)	7 (14%)	29 (58%)	15	50
51-71	18 (24.32%)	4 (8.10%)	51 (66.21%)	4	73

Figure 25: Interpretation by age (references open-ended questions 90, 57, 59, 85, 52, 51, 44, 54, 55, 63, and 61)

	Understanding of Client	Beneficence	Understanding of Family Dynamics	Assessment	Rapport	Diagnosis	Treatment/Structure	Goal Setting	Total
HTP	2	2	0	1	2	1	2	0	10
PPAT	1	0	0	2	1	0	3	0	7
Bird's Nest	2	0	0	2	1	0	2	0	6
Family Drawing	2	2	5	3	2	1	2	1	18
Kinetic Family Drawing	2	2	2	1	1	0	1	1	10
Bridge Drawing	2	0	1	2	2	1	2	1	11
HBL Verbal/Nonverbal (written in)	---	---	---	---	1	---	1	---	2

Figure 26: Reasons for use of art assessments (references open-ended questions 87 & 88)

		If you are a practicing art therapist, which art therapy projective assessments have you used with clients?								Total
		I am not a practicing art therapist	House-Tree-Person	Person Picking an Apple from a Tree	Bird's Nest	Family Drawing	Kinetic Family Drawing	Bridge Drawing	Other	
What is the highest level of education level achieved?	Elementary/Middle School	0	0	0	0	0	0	0	0	0
	High School/High School Equivalent	0	0	0	0	0	0	0	0	0
	Associates, in progress	0	0	0	0	0	0	0	0	0
	Associates, completed	0	0	0	0	0	0	0	0	0
	Bachelors, in progress	0	0	0	0	0	0	0	0	0
	Bachelors, completed	0	0	0	0	0	0	0	0	0
	Graduate, in progress	0	0	0	0	0	0	0	0	0
	Graduate, completed	0	6	3	3	11	5	5	0	11
	Ph. D, in progress	0	1	0	0	1	1	0	0	1
	Ph. D, completed	0	1	1	1	2	2	1	1	2
	Other	0	0	0	0	0	0	0	0	0
Total		0	8	4	4	14	8	6	1	14

Figure 27: Education and use of art assessments (references questions 7 [Figure 4] & 87)

**Analysis of Data**

Open-ended data derived from the survey was composed of subject’s independent analysis of what selected features of the animal revealed about their own personality. Researchers categorized these interpretive responses into groups consisting of: no interpretation of subject animal characteristics onto personality, pragmatic interpretation of animal characteristics, and metaphorical interpretation (Fig. 24). Metaphorical interpretations were further classified as either an internal or relational based on the use/context of the metaphor. Defined by the researchers, pragmatic interpretation refers to a realistic interpretation with no aspects of personality considered in the derived meaning. Metaphorical interpretation attends to any figurative response that extracts personality traits from the presented animal’s characteristics. Metaphorical answers that consisted of intrapersonal qualities were considered an internal-metaphorical response, while answers that consisted of interpersonal qualities were defined as a relational-metaphorical response.

Researchers interpreted subject responses through use of keywords such as, “Other people” and “Environment” as potential references of a Relational response, while phrases like “I like,” “I am,” and “I feel” as possible indicators to an Internal response. “It’s just how I pictured

it” is an example of a Pragmatic response interpretation, while “Nothing” is an example of a response coded under No Interpretation. Any response that was left blank or did not respond to the question directly was coded as Incomplete/No Response (N/A in subsequent charts).

**Metaphorical interpretation by age group.** Researchers went on to compare generationally separated age ranges to interpretively coded responses (Fig. 25). While data shows that Metaphorical interpretation was the dominant style across all ages groups surveyed, Millennials (ages 21-37) were most likely to metaphorically identify personality traits through interpretation of animal characteristics drawn, at 83.01%. 0% of subject responses in this age group were coded as No Interpretation. Comparatively, Generation X responses (ages 38-50), revealed greater variance in interpretation, coded at 30% No Interpretation, 14% Pragmatic, and 58% Metaphorical. The largest subject pool, Baby Boomers (ages 51-71), with 73 completed responses, were found to have similar results to those in the Generation X subject pool: 24.32% No Interpretation, 8.10% Pragmatic, and 66.21% Metaphorical interpretation.

**Comparison of metaphorical responses.** When coding the open-ended questions into subcategories of Internal and Relational Metaphorical responses, researchers found that seven out of 11 questions showed more than 25% difference between the two subcategories. It is possible that the question could have guided such response bias, highlighting the influence of question construct within personality assessments. The following questions resulted in a majority skewed towards Internal response:

- Question 59: *What do you believe the body position of your animal reveals about your personality?* (66.66% Internal & 6.66% Relational)
- Question 85: *What do you believe the eating habits of your animal reveal about your personality?* (52.94% Internal & 11.76% Relational)

- Question 44: *What do you believe the style of your animal's tail reveals about your personality?*  
(42.85% Internal & 14.28% Relational)
- Question 54: *What do you believe the extremities of your animal reveal about your personality?*  
(62.50% Internal & 18.75% Relational)
- Question 61: *What do you believe the action your animal is engaging in reveals about your personality?* (71.42% Internal & 14.28% Relational)

The following questions skewed toward majority Relational responses:

- Question 51: *What do you believe the presentation of your animal's ears reveal about your personality?* (62.50% Relational & 12.50% Internal)
- Question 63: *What do you believe the social relations of the animal you drew reveals about your personality?* (100% Relational)

**Social relations as indicator of projection.** Subject responses to Questions 62 (Fig. 16) and 63, identifying social aspects of the animal drawn and linkage to personality, were compared for thematic congruence. Data shows that of the 13 open-ended responses coded as Metaphorical, 84.61% were in alignment with the environment of animal drawn, perhaps indicating a projection of self in the presented imagery. Only one subject response was considered incongruent, with a “Large group communal or social” indication followed by a subject response stating, “I tend to avoid large groups.” Interestingly, one subject response was labeled as partially congruent: the social relations for the presented animal was “Independent or isolated” while subject response stated “I’m equally comfortable among others as I am happy and peaceful in my solitude.” It is possible based on the language used that such an analysis reflects a dichotomous interpretation of the option, in which case it would instead be thematically congruent.

**Emergent themes.** While categorizing responses, researchers discovered emergent themes based on repetitive language used across open-ended subject responses. Question 73: “Is

*there anything else you would like us to know about your animal?*” offered subjects an opportunity to report additional details and potential meanings not covered in this survey. It elicited six responses that were organized into the following three groups with their respective response percentages:

Emotion - subject identified an emotion for their drawn animal (50%)

Justification - subject identified a preference or historical reasoning for their choice in animal (33.33%)

Accessory - subject identified an article of clothing or accessory worn by their drawn animal (16.67%)

Subjects who responded to Question 73 were asked to respond to Question 74: *“What do you think this may reveal about your personality?”* to which four responses were submitted. 100% of the responses provided were interpreted as Metaphorical, of which 75% were considered Internal. Given the nature of the question and consistent use of Metaphorical Interpretation, particularly Internal, it is possible that the decrease in interpretive responses reflects the information of the animal as being considered by the subject to be parallel or reflective of information of self and therefore not needing of additional analysis.

While there was not a lot of contextual consistency across inter-subject open-ended sections, there were niche consistencies in language discovered. This may indicate patterns in question interpretation. The following points reflect similarities in keywords used across a majority of particular open-ended responses:

- 10 out of 12 metaphorical responses referenced “listening,” “hearing,” or “being alert” in response to Question 51: *“What do you believe the presentation of your animal's ears reveal about your personality?”*
- Of the Relational Metaphor coded subject responses which referenced “direct communication” in reflection of Question 57: *“What do you believe the orientation of your animal reveals about your personality?”* all responses also identified their animal as oriented “Straight on” in response to Question 28: *“Which of the following best describes the orientation of your animal?”* (Fig. 7).

- In response to Question 57: *“What do you believe the orientation of your animal reveals about your personality?”* five of 11 Metaphorical responses referenced “seeing” or “looking.” Similarly, five of 11 responses categorized as Metaphorical referenced “awareness,” “alertness,” and “looking” in response to Question 32: *“Which of the following best describes the body position of your animal?”* (Fig. 8).

**Personal and clinical use of personality tools.** This survey asked participants their experience with personality tests or tools, including which tests they thought were most accurate to themselves. Of 14 respondents, all practicing art therapists, 66.66% had taken projective tests, including art therapy assessments (Fig. 20). Question 80: *“What are other tools you have used to understand your personality?”* shows 11 subject responses (Fig. 21) most commonly using Astrology (90%), Tarot Card/Palm Reading (72.72%), and Chinese Zodiac (63.63%). When considering accuracy (Fig. 22), out of 11 subjects, 47.62% reported Myers-Brigg as most accurate, followed by 14.29% for the Enneagram and Astrology each, and 9.52% reported Tarot Cards/Palm Reading.

Arts-based assessments used with clients were also tallied (Fig. 23). The Family Drawing was the only test used by 100% of subjects. Data showed that The Kinetic Family Drawing, Bridge Drawing, and House-Tree-Person combined represented nearly half (48.43%) of the art therapy assessments used by this sample of practicing art therapists. When considering the impact of education level on clinical assessment use (Fig. 27), it is worth noting that all respondents have completed graduate degrees and three are in the progress of completing or have completed a Ph.D. Little variance in assessment selection across education levels may suggest continuity of familiarity, however limited subject pool size may be skewing data.

**Reasons for assessment use.** This survey assessed the use of arts-based personality assessments by practicing art therapists in clinical settings, including perceptions of benefits and reasons for both personal and professional use. The sample was composed entirely of practicing



art therapists. Question 82: *“What do you find beneficial about personality tests or results?”* resulted in 14 open-ended responses that were coded into six categories based on thematic keywords identified by researchers: “No benefit” (1 response), “Insight” (2 responses), “Validation” (2 responses), “Fun/amusement” (3 responses), “Revealing” (3 responses), and “Self-exploration” (five responses). Some responses were counted under multiple categories. Question order and word themes suggest response bias towards personal use.

The 14 coded open-ended responses discerning assessment use with clients revealed eight categories for clinical rationale (Fig. 26) including: “Understanding of client” (11 responses), “Beneficence” (6 responses), “Understanding of family dynamics” (8 responses), “Assessment” (11 responses), “Rapport” (10 responses), “Diagnosis” (3 responses), “Treatment/Structure” (13), and “Goal setting (three responses).” “Understanding family dynamics” was the dominant reason for incorporation of The Family Drawing, used by 100% of the sample pool.

**Comparing metaphorical interpretations to accuracy.** Researchers further explored the 15 respondents would had any Metaphorical interpretation of their animal drawing throughout the survey, to see which selected personality tests or tools used were most accurate to their personality (Fig. 22). 73% of the respondents stated that they both used personality tests and found them accurate. Of the respondents that met both of these criteria, the data differed only slightly in percentage to the general sample while following the same hierarchy of accuracy: Myers-Brigg (53%), Enneagram and Astrology (20%), and Tarot Cards/Palm reading (13%). This shows a strong correlation between subjects perception of personality tests as accurate and subjects metaphorically interpreting their drawings.

**Researchers’ interpretation of subject drawings.** The following section interprets variations and consistencies between researcher and subject responses to 14 closed-ended

questions regarding identification of drawn animal features. Of the original survey subject pool, nine respondents' uploaded an image of their animal drawing (Appendix C), which each researcher interpreted independently. Compared responses were considered congruent based on any inclusion of a corresponding response. Data showed that there was 65.87% congruency between inter-researcher interpretations of drawing features, and 48.41% alignment when comparing congruent researcher interpretations to subject responses. These statistics reveal significant discrepancies in inter-rater reliability as well as between interpretation of self versus others.

## Discussions

This research explored subjective meanings of participant drawings by way of categorical coding systems developed by the researchers. These systems were used to interpret and understand subject analysis of animal features and reflection of self. Analysis of participants' demographics, experience with projective tests, personality tests or tools, art therapy assessments, and perceived accuracy of personality tests or tools furthered understanding of projection within assessments.

### Significant Findings

Significant findings of this study include potential connections between age and interpretation style, patterns and differences in metaphorical interpretation styles, and emergent themes in response language. Data also revealed a possible indication of projection of self in imagery through the significant number of metaphorical interpretations and suggested correlations between personality tests, art assessments, and interpretation of animal drawn.

**Demographics.** As compared to Generation X responses (ages 38-50) and Baby Boomers (ages 51-71), Millennials (ages 21-37) were most likely to metaphorically identify personality traits through their interpretation of animal characteristics drawn. The former two groups, although also dominant in Metaphorical interpretation, had greater variance in analysis style. This may be in part due to a larger representation within the sample, as subjects were predominantly between the ages of 51-70. Given the limited size of the overall subject pool, data may reflect a skewed representation of the overall art therapy population; however increased variance in sample size may produce more valid results.

**Thematic congruence, language consistency, and emergent themes.** Findings show thematic congruence when asked about the environment of their animal by 84.61% showing their

metaphorical interpretation in align with the environment. In addition, there were niche consistencies of subjects reflecting their interpretation with the language used in the questions. This may be due to the language/framework of the questions and/or subjects assumptions of certain features of the animal directly relating to a personality trait, such as ears relating to listening and orientation of animal relating to seeing or looking. Furthermore, there were emergent themes of emotion, justification, and accessory when asked if subjects would like to add any other details about the drawing that the other questions did not ask.

**Clinical use of art assessments.** Another important finding of the study is determining what types of art assessments are used in therapy and why. Findings show that 100% of the 15 art therapist respondents that finished the survey use the family drawing assessment in a clinical setting. Additionally, subjects reported that art assessments are used for “Understanding of client perspective,” “Beneficence,” “Understanding family dynamics,” “Assessment,” “Rapport,” “Diagnosis,” “Treatment structure,” and “Goal setting.” The reported reasoning for use of art assessments is typically skewed toward positive responses, possibly due to the one-sided questioning and failure to survey reasoning for not using art assessments. This may be useful for further studies to determine the reliability and accuracy of art assessments used in the therapeutic space. Furthermore, the survey revealed which personality tests and/or tools were used by the subjects. Researchers were then able to compare subject use of assessments to personal reasoning for use, illuminating commonalities across subjects. It may have been useful for researchers to consider existing language within literature on the topic when creating this survey. For example, using subjective wording such as “familiarity,” as a means to understand and compare use may have resulted in more ambiguous responses and, ultimately, less consistent data.

**Personal use of projective tests.** An interesting finding from the data depicted a noticeable correlation between subjects with multiple metaphorical interpretation responses and subject identification of personality tests as accurate. Of 15 respondents, 73% that had any metaphorical interpretation of their animal drawing stated that they used personality tests and found the results to be accurate. This may be indicative of subject's consistency to project their personality regardless of the nature of the projective test or assessment. This finding may elicit further research in regards to determining the source of a subject's projection, are individuals influenced by personality tests or does their personality influence how they interpret or use those tests?

### **Study Limitations**

**Demographics.** It should be taken into consideration that, although randomized, the sample pool was limited. Subjects were mostly females, predominantly between the ages of 51-70, all of which were practicing art therapists and alumni from LMU's Marital and Family/Art Therapy department. All subjects had a graduate degree or higher. While the data may be robust for this particular population, the findings are in turn limited in generalizability to the general population taking personality assessments.

Researchers, consequently, are unable to generalize correlations found between factors such as education level and experience with personality tests, particularly when considering biases of art therapy education, including where the education was received, personal experience with art therapy as a client and/or practitioner, style of therapy, etc. These influences may facilitate increased insight, affecting perception of accuracy in personality tests or tools, as well as how subjects interpret their own imagery. These limitations resulted in further questions by the researchers, such as: Will art therapists educated outside of Loyola Marymount produce

similar results to those previously surveyed? Will non-art therapists project their personalities with their own animal drawings in the same way? If so, will it be more in depth or less in depth?

**Interpretation style.** The study does not directly assess for the influence of personal interpretation style of therapists (sample pool) on interpretation of client artwork. Is there consistency in interpretation of self vs. other and, if so, does it make a difference? As stated above, the study shows that researchers' interpretations of physical features within drawings compared to participants' interpretation differs. Does this difference come from experience level, knowledge of animals, or other factors unique to each individual, such as their relationship to the imagery? The education that each art therapist received in their own experience, including their art education and their theoretical lens in which they practice may influence interpretation of self and others when using projective tests. In addition, their past experience and cultural lens may influence their interpretation of client art. There may be other factors, as well, that are not noted that affect the clinician or researcher interpretation, such as counter-transferences, internal and external biases, and personal beliefs.

Another limitation of the study is noticed in a lack of determining the source of results as they relate to personalities; do subject's personalities inform assessment results or are the results internalized and thereby inform subject's personalities? Responses and interpretations to the art assessment provided were self-generated and therefore subjectively projected by the subject. Researchers wonder if these results are limited due to the assessment provided, for example the use of an animal as the character drawn. How does the use of an animal in this research affect the data? Do the subjects relate more to their character because it is an animal (i.e. spirit animals)? Do they like animals and if they do, how does this affect their ability or willingness to project their personality onto a drawn character?

Moreover, how can we as art therapists consider the biases resulting from internal and external factors influencing how we interpret projective tests in the therapeutic space when discussing artwork? The data shows that art therapist may utilize art assessments to initiate conversation and build rapport in a clinical setting. However, does the art therapist's own interpretation and understanding of the art produced affect the conversation and in turn their client's understanding of self?

**Biases to consider.** Certain biases to consider in the research are the following:

- Cultural biases - individual's understanding and categorization of animal traits may vary across cultures.
- Design bias - wording of questions may encourage metaphorical interpretation of characteristics that subjects may not be prone to identify otherwise.
- Researcher bias - subjects' and researchers' experience with animals, exposure to animals, knowledge of animals.

Additionally, researchers' coding system lacks inter-rater reliability due to lacking strict definitions and framing for categorization of open-ended responses, indicating that researcher's biases should be considered in the interpretation.

Furthermore, the framework of this survey was limited in its interpretation; the researchers main consideration was a comparison of number of responses within different categories by responses of each subject. Future surveys may benefit from inclusion of the number of responses by each subject definitively. Lastly, the data illuminates discrepancies in inter-rater reliability as well as consistency between groups. This was done by comparing the researchers interpretation of uploaded drawings Appendix C through closed-ended responses to between researchers and to subject responses. These incongruences of researcher interpretation

of open-ended questions suggest a likelihood of inconsistencies in inter-rater reliability for open-ended questions as well.

### **Future Research**

The researchers discovered consistencies across individuals in their thematic interpretations of self through their use of metaphorical interpretations, therefore, we wonder about the potential that subjects are bringing such an interpretive bias into their use of art assessments in a clinical setting. How might this bias affect the therapeutic space and possibly the therapeutic relationship? Additionally, further research might explore how and why subjects use personality tests thereby exploring possible correlations between subject interpretations and use of art assessments.

The current research can be expanded by exploring more in-depth subject connection between drawn animals and projection of self, including metaphorical, pragmatic, and lack of interpretation. Researchers are curious to further understand what a subject's pragmatic interpretation of their animal says about their understanding of self - Does this say something about their resistance to external interpretation or projection of personalities? Do some individuals draw based on their ability to draw, confidence level, and willingness to take risks? What factors influence a person to make intrapersonal or interpersonal projections of their animal drawing?

Other factors to consider are identifying what may affect or change our subject's personalities on a daily basis, both as influences in our presentation and interpretation of self and others. These factors may be functional needs (i.e. hunger, sleep, etc.), situational outside circumstances (i.e. distressing life events), and preconceived biases/assumptions/beliefs about personality/person in observation. Therefore, further research may explore whether or not art



assessments and/or personality tests determine a person's long lasting innate attributes and personalities traits which may be influenced daily by external factors. Further research may attempt to answer the following questions: Can someone's personality be judged by an assessment executed in one particular time? Is the personality interpretation then limited to that moment? How does this affect long-term implication of diagnoses and possible legal sentencing?

Lastly, future research can ask participants to project/interpret their animal drawings without any context or asking them to explore each trait/aspect of the animal to find what parts of the animal they interpret and how. This can be followed up with questions about each trait/aspect of the animal to determine if people even interpret themselves according to different traits of an animal or as a whole. Moreover, how a question is framed and the words used in the question can be researched to see its influences on interpretations or responses.

### Conclusions

The current study was designed to explore the linkage between personality assessments - particularly those that are arts-based - and how people perceive or project themselves throughout the administration and interpretation processes. The research also developed an understanding of the types of personality tools and assessments used in both clinical and popular domains.

Our data contributed conversation to multiple aspects of the existing literature, including support of the notion that the Myers-Brigg assessment is perceived to be most accurate by users. The literature review by Moyle and Hackston (2018) concluded Myers-Brigg as being the most popular in employee selection, but was limited due to it not capturing behaviors that are related to current situations and influence of past environmental factors. Similarly, our research did not determine if it indicated a subject's personality in a moment in time or if they were long lasting traits of a character.

By exploring perception and projection as it relates to assessments, this study offers valuable insight that can influence assessment utilization across multiple fields. Existing literature outlines how assessments have been used for various purposes, such as clinical settings and diagnoses, employment evaluations, and legal matters (Handel, 2016; Silber, Karp, & Holmstrom, 1990; Ruiz et. al, 2018). Contributions such as these to the larger thematic understanding of assessments, including art assessments, can in turn affect broader domains of service.

Although this pilot study did not explore specific assessments, it illuminated multiple motivations for engagement of personality tests. On a personal level, reasons included providing insight, validation, fun/amusement, revelations of self, and prompting self-exploration. This study also acknowledged justification for art assessment use at a clinical level. Participants who

are practicing art therapists indicated implementation of these tests to assist with understanding clients, assessment, building rapport, treatment structure, goal setting, and diagnosis. The data expanded Cohen, Mills, and Kijak's (1994) research, which solely identified familiarity as the primary influencing factor in a clinician's choice of assessment technique. Further exploration and understanding of assessment motivations, both at an administrative and participatory level, could be particularly useful for clinical application. By utilizing intrinsic motivation of standardized assessments, including arts-based tools, the field could in turn address interpretation bias found in non-standardized assessments, as this study also revealed.

As noted in the discussion section above, the data cultivated from this research depicts possible contradictions between interpersonal interpretations of art products, highlighting the potential for this pattern in works created within a therapeutic setting. Varying factors contribute to these discrepancies; however, the art process, product, and client potential for projection of self onto these elements may outweigh the potential for misinterpretation. Multiple subjects reported these factors to be especially beneficial when the art-making and assessments are used as a means of understanding client perspective (Tapp, 2010). The significance of "misinterpretation" is thus brought to question, with data from this research proposing projection of self within individual's interpretation of work often differing from clinicians' due to our unique innate characteristics.

Moreover, this research outlines an ongoing use of symbolic or metaphorical interpretation, which may be beneficial in acting as a conduit for client self-reflection, and a deeper understanding of the inner self (Miller, 1997; Sysling, 2018). This pilot study suggests a lacking reliability and validity in the use of metaphorical interpretations in a clinical setting as the literature also indicates (Greasley, 2000). Still, the continued popularity and non-clinical use

of these projective tests alludes to their beneficence. Personality assessments, including arts-based, are therefore worth considering in a clinical setting when biases, such as culture and researcher or therapist interpretation discussed above, are considered.

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**Appendix A: IRB Approval Letter****IRB Approval/Bailey/Giacona/Yang**

① This message was sent with High importance.



Paterson, Julie

Wed 2/27/2019 7:57 AM

Giacona, Noelle; angel.yang3@gmail.com; hnnh.bailey@gmail.com; Bodlovic, Anthony; Reilly, Elizabeth; Paterson, Julie ✕



Dear Ms. Bailey, Ms. Giacona and Ms. Yang,

Thank you for submitting your IRB application for your protocol titled **Art Therapy Projective Assessment Survey**. All documents have been received and reviewed, and I am pleased to inform you that your study has been approved.

The effective date of your approval is **February 27, 2019**. Please note that if there are any changes to your protocol, you are required to submit an addendum application to the IRB.

For any further communication regarding your approved study, please reference your **new IRB protocol number: LMU IRB 2019 SP 35-R**.

Best wishes for a successful research project.

Sincerely,

*Julie Paterson*

**Julianne Paterson**

Senior Compliance Coordinator

1 LMU Drive, University Hall, Suite #1718

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Telephone: (310) 258-5465

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## Appendix B: Survey

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### Consent

Please open and read the informed consent below before proceeding with the survey.

[Informed consent](#)

Did you read the consent form?

- Yes, I consent and agree to the terms of the survey.
- No, I do not consent and do not agree to the terms of the survey.

### Demographics

How old are you?

- 18-20
- 21-37
- 38-50
- 50-71
- 71-89
- 90+

What gender do you most identify with?

- Male
- Female
- Transgender
- Non-binary/genderqueer
- Other
- I would rather not say

Which group do you identify with? (click all that apply)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander

- White
- Other
- I would rather not say

What is your experience with art therapy?

---

- I have never heard of it
- I have heard about it but not participated in it
- I have some experience participating in it
- I am studying it
- I am a practicing art therapist

What is the highest level of education level achieved?

---

- Elementary/Middle School
- High School/High School Equivalent
- Associates, in progress
- Associates, completed
- Bachelors, in progress
- Bachelors, completed
- Graduate, in progress
- Graduate, completed
- Ph. D, in progress
- Ph. D, completed
- Other

How would you best describes your occupation?

---

- Science
- Technology
- Business Field
- Engineering Field
- Healthcare
- Math
- Social Services

- Arts/Creative Field
- Education and Training
- Other

### **Directive**

Please take a moment to use standard printer paper and pen or pencil to create an animal of your choice. When you have completed your drawing, please click next and proceed.

---

- Next

### **Animal Description**

In the following section you will be asked to describe and interpret your drawing as it relates to your personality. Please select all that apply.

---

Please indicate the type of animal or mythical creature you have created.

---

Which of the following best describes the amount of space your animal takes on the paper?

---

- Under 25%
- 25- 49%
- 50- 75%
- Over 75%

What do you believe the amount of space your animal takes up says about your personality?

---

Which of the following best describes the orientation of your animal?

---

- Profile
- Straight on
- Other



What do you believe the orientation of your animal reveals about your personality?

Which of the following best describes the body position of your animal?

- Realistic to animal in nature
- Unrealistic to animal in nature
- Other

What do you believe the body position of your animal reveals about your personality?

What are the eating habits of your animal?

- Herbivore
- Omnivore
- Carnivore
- Other

What do you believe the eating habits of your animal says about your personality?

Which of the following categories best describes your animal?

- Amphibian
- Reptile
- Bird
- Land mammal
- Sea mammal
- Monotreme

- Insect/arachnid
- Fish/shellfish
- Fantasy/other

What do you believe the category of your animal reveals about your personality?

---

Which of the following best describes the ears of your animal?

---

- Pointed ears
- Round ears
- Droopy ears
- Erect ears
- No ears
- Other

What do you believe the presentation of your animal's ears reveal about your personality?

---

Which of the following best describes the tail of your animal?

---

- Short and thin
- Long and thin
- Long and full
- Short and full
- No tail
- Other

What do you believe the style of your animal's tail reveals about your personality?

---

Which of the following best describes the extremities of your animal?

---

- Claws
- Paws
- Hooves
- Hands
- Tentacles
- Fins
- Wings
- No extremities
- Other

What do you believe the extremities of your animal reveal about your personality?

---

Did you place your animal in an environment?

---

- No
- Yes

Which of the following best describes the environment you created in your drawing?

---

- Realistic to nature of animal
- Unrealistic to nature of animal
- A combination of realistic and unrealistic

What do you believe the environment you created reveals about your personality?

---

Which of the following best describes social relations of the animal you drew?

---

- Large group communal or social
- Small group communal or social
- Independent or isolated
- Other

What do you believe the social relations of the animal you drew reveals about your personality?

---

Is the animal you drew engaging in an activity?

---

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Which of the following best describes the action your animal is engaging in?

---

- Realistic to animal in nature
- Unrealistic to animal in nature

What do you believe the action your animal is engaging in reveals about your personality?

---

Is there anything else you would like us to know about your animal? If not, please write "no".

---

If you provided additional information, what do you think this may reveal about your personality?

If you did not provide additional information, please write "not applicable".

---

### **Drawing Upload**

Please take a clear photo of your drawing and upload it if you feel comfortable. Please do not include your name on the drawing. Uploading a photo of your drawing is optional.

---

### **Projective Tests**

Have you ever taken a projective test? A projective test is a psychological test in which the subject is asked to respond to ambiguous material which is analyzed for unconscious material in which is thought to reveal the subject's personality.

---

- Yes
- No
- Maybe

What kind of personality tests have you taken? (Click all that applies.)

---

- Myers-Brigg
- Big Five Personality Test
- Disc Assessment
- Enneagram
- The Winslow Personality Profile
- Process Communication Model
- The Holtzman Inkblot Technique
- Hexaco Personality Inventory
- The Revised Neo Personality Inventory (Neo PI-R)
- The Personality Assessment System
- Art Therapy Assessments

Other

What are other tools you have used to understand your personality? (Click all that applies.)

---

- Astrology
- Shaman/Psychic
- Tarot Cards/Palm Reading
- Numerology
- Chinese Zodiac
- Other

Which personality tests or tools were most accurate to your personality?

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- Myers-Brigg
- Big Five Personality Test
- Disc Assessment
- Enneagram
- Process Communication Model
- The Winslow Personality Profile
- The Holtzman Inkblot Technique
- Hexaco Personality Inventory
- The Revised Neo Personality Inventory (Neo Pi-R)
- The Personality Assessment System
- Astrology
- Shaman/Psychic
- Tarot Cards/Palm Reading
- Other

What do you find beneficial about personality tests or results?

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If you are a practicing art therapist, which of the following art therapy projective assessments have you used with clients? Check all that apply

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- I am not a practicing art therapist
- House-Tree-Person
- Person Picking an Apple from a Tree
- Bird's Nest
- Family Drawing
- Kinetic Family Drawing
- Bridge Drawing
- Other

Why do you use the projective tests chosen above?

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The survey is now complete - thank you for your participation!

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Appendix C: Presentation of Provided Survey Drawings

