

Barron-Welsh Art Scale (BWAS)

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1. Core Definition

The Barron-Welsh Art Scale (BWAS) is a specialized psychological instrument designed to assess an individual's level of creativity through a non-verbal medium. Developed by the prominent American psychologists Frank Barron and George Welsh, this scale diverges from traditional verbal tests by focusing on an examinee's artistic expressions and their underlying psychological processes. It aims to capture a facet of creativity that is independent of language proficiency, cognitive intelligence (IQ), age, and gender, thereby offering a more inclusive measure of creative potential across diverse populations. The test requires participants to engage in a drawing task, from which trained evaluators score various manifestations of symbolic thought and personal expression. This approach positions the BWAS as a distinctive tool within the broader landscape of creativity assessment, emphasizing the qualitative aspects of creative ideation over quantifiable output or problem-solving abilities.

At its essence, the BWAS operates on the premise that creative thinking is deeply intertwined with unconscious processes and ego functions, drawing heavily from the psychoanalytic theories of Sigmund Freud. Unlike many psychometric tools that seek to identify convergent thinking or specific aptitudes, the BWAS is geared towards understanding divergent thinking and the unique ways individuals symbolize experiences and generate novel ideas. The non-verbal nature of the scale makes it particularly valuable for assessing creativity in individuals who may have language barriers, developmental differences, or those for whom verbal expression of creativity might be constrained. Its broad applicability across different age groups, from children to adults, underscores its versatility and its developers' ambition to create a universally applicable measure of creative capacity that transcends demographic variables.

The scale posits that genuine creativity is not merely about producing something new, but about the unique psychological mechanisms employed in its generation. It probes into an individual's capacity for complex symbolization, their propensity for substitution (replacing one idea with another), their goal-directedness in creative tasks, and the emergence of a distinctive personal style. Furthermore, the BWAS considers the influence of social attitudes on creative expression, acknowledging that creativity does not exist in a vacuum but is often shaped by an individual's interaction with their environment. By examining these multifaceted processes, the BWAS provides a rich, albeit interpretive, insight into the internal workings of the creative mind, setting it apart from instruments that focus purely on the products of creativity.

2. Theoretical Foundations: Freudian Psychology

The conceptual bedrock of the Barron-Welsh Art Scale is firmly rooted in the psychoanalytic framework established by Sigmund Freud, particularly his theories concerning the unconscious mind and the dynamics of ego functioning. Freud posited that much of human thought, emotion, and behavior is driven by unconscious desires, conflicts, and defense mechanisms. He also emphasized the role of symbolism as a primary language of the unconscious, manifesting prominently in dreams, fantasies, and creative expressions. The BWAS integrates these Freudian principles by interpreting the drawings produced by examinees not merely as artistic outputs, but as symbolic representations of their internal psychological landscape. The scale's scoring criteria are designed to identify subtle manifestations of unconscious processes, such as the use of primary process thinking (characteristic of the id and the unconscious) and how the ego mediates these impulses into coherent, albeit creative, forms.

Central to Freudian theory, and consequently to the BWAS, is the concept of sublimation, a mature defense mechanism where unacceptable impulses or thoughts are transformed into socially acceptable behaviors or creative endeavors. The act of drawing, within the context of the BWAS, is viewed as a form of sublimation, allowing the examinee to externalize internal conflicts, desires, or anxieties in a constructive and often innovative manner. The various elements scored, such as symbolization and substitution, directly echo Freudian ideas about how the unconscious finds expression and how the mind reconfigures reality. For example, a drawing's complexity, originality, or unusual imagery might be interpreted as indicators of a rich unconscious life and a flexible ego capable of transforming raw psychological material into meaningful, creative forms. This theoretical lens allows the BWAS to delve deeper than surface-level observations, aiming to uncover the psychological underpinnings of creative potential.

Furthermore, the BWAS's focus on personal style and the integration of diverse elements within a drawing aligns with Freudian notions of ego strength and integration. A well-integrated ego, according to Freud, is capable of mediating between the demands of the id, the superego, and external reality, leading to adaptive and often creative solutions. In the context of the BWAS, a drawing that demonstrates a unique yet coherent personal style, alongside effective goal-directedness, might be seen as an indicator of a robust ego capable of harnessing unconscious impulses for creative production. By providing a structured yet open-ended task, the BWAS invites a projection of the inner world, which, when analyzed through a psychoanalytic lens, reveals insights into an individual's creative processes and their psychological health. This deep theoretical grounding distinguishes the BWAS from purely descriptive or performance-based creativity tests, embedding it within a rich tradition of depth psychology.

3. Historical Development and Proponents

The Barron-Welsh Art Scale was developed by two distinguished American psychologists, Frank Barron and George Welsh, during the mid-20th century, a period marked by burgeoning interest in the scientific study of creativity. Both scholars were affiliated with the University of California, Berkeley, and were instrumental in establishing the Institute of Personality Assessment and Research (IPAR), a renowned hub for psychological research that emphasized the study of healthy, highly functioning individuals, particularly those exhibiting exceptional creative talents. Their collaboration on the BWAS emerged from a broader research agenda at IPAR aimed at understanding the psychological characteristics that differentiate creative individuals from their less creative counterparts. They sought to move beyond mere anecdotal observations of creativity and develop empirically sound methods for its assessment, laying the groundwork for a more systematic approach to the field.

Frank Barron, a psychologist and philosopher, was a central figure in the early psychological exploration of creativity. His work at IPAR, including his seminal studies on creative writers, architects, and scientists, profoundly influenced the understanding of creative personality. Barron's research consistently highlighted traits such as openness to experience, independence of judgment, aesthetic preference for complexity and asymmetry, and a strong inner life--qualities he believed were deeply connected to creative output. The BWAS, in many ways, represents an attempt to operationalize some of these observed characteristics, particularly the preference for complexity and the capacity for symbolic expression, into a measurable scale. His philosophical background also imbued his work with a holistic perspective, viewing creativity not just as a cognitive skill but as an integral aspect of the human personality and a manifestation of psychological health.

George Welsh, a clinical psychologist, complemented Barron's theoretical insights with his expertise in psychometrics and personality assessment. Welsh was known for his contributions to the Minnesota Multiphasic Personality Inventory (MMPI) and his development of various scales to measure personality dimensions. His involvement was crucial in structuring the BWAS as a standardized instrument capable of yielding quantifiable data from qualitative drawings. Together, Barron and Welsh combined their strengths--Barron's profound understanding of creative personality and Welsh's methodological rigor--to create a unique assessment tool. Their collaborative effort resulted in a scale that, despite its Freudian underpinnings, aimed to provide an objective, albeit interpretative, measure of creative potential, applicable across diverse demographic and cognitive profiles. The BWAS stands as a testament to their pioneering efforts to bring scientific inquiry to the elusive concept of creativity.

4. Methodology and Administration

The administration of the Barron-Welsh Art Scale (BWAS) is straightforward, emphasizing a natural and unconstrained drawing experience. Examinees are typically presented with a blank sheet of paper and a drawing utensil, commonly a pencil, and are instructed to "draw whatever you want." Unlike many art-based assessments that provide specific prompts or themes, the BWAS intentionally leaves the task open-ended to encourage spontaneous and uninhibited creative expression. This minimalist instruction aims to reduce external influences and allow the individual's inherent preferences, styles, and unconscious processes to manifest more freely in their drawing. The environment for administration is usually quiet and comfortable, designed to minimize distractions and promote a relaxed state, which is conducive to creative ideation. There are no time limits imposed, further reinforcing the non-pressured nature of the assessment and allowing individuals to work at their own pace until they feel their drawing is complete.

Once the drawing is completed, it is then subjected to a detailed evaluation process by trained scorers. The scoring of the BWAS is qualitative and requires a nuanced understanding of the scale's criteria, which are rooted in Freudian psychoanalytic concepts. Scorers look beyond the aesthetic quality of the drawing to assess specific manifestations of psychological processes. Key elements observed include the use of **symbolization**, where abstract ideas or emotions are represented visually; **substitution**, referring to the replacement of conventional forms with idiosyncratic or novel imagery; **goal-directedness**, indicating the coherence and intentionality behind the drawing's composition; and the emergence of a distinctive **personal style**, reflecting the individual's unique creative signature. Additionally, scorers consider the complexity, originality, elaboration, and the integration of various components within the drawing. These criteria collectively contribute to a comprehensive assessment of the examinee's creative capacity as manifested through their artistic output.

A critical aspect of the BWAS methodology is its emphasis on non-verbal communication. By relying solely on visual output, the scale bypasses linguistic and cognitive biases that might influence other forms of creativity assessment. The evaluation process involves a careful analysis of the drawing's structural elements, thematic content, and overall impression, interpreted against a standardized set of guidelines. Scorers are trained to identify patterns and characteristics that have been empirically linked to creativity as defined by Barron and Welsh's research. This involves a subjective element, requiring considerable expertise and consistent application of the scoring rubric to ensure reliability. While the process is interpretive, the developers provided detailed scoring manuals and examples to guide evaluators, striving for consistency in assessing the presence and quality of the targeted creative manifestations. The final score is not merely a judgment of artistic skill but a reflection of the depth and originality of the underlying psychological processes contributing to the creation.

5. Scoring and Interpretation

The scoring of the Barron-Welsh Art Scale (BWAS) is a sophisticated process that moves beyond a simple evaluation of artistic skill or aesthetic appeal. Instead, it focuses on identifying specific psychological indicators of creativity embedded within the drawings, consistent with its Freudian theoretical underpinnings. Trained evaluators apply a detailed rubric that assesses various dimensions, including **complexity-simplicity** and **order-disorder**, often using a system where drawings are categorized based on their perceived originality and aesthetic preference by a panel of judges, or by the presence of certain formal elements. For instance, drawings that exhibit greater complexity, asymmetry, and novelty are generally associated with higher creativity scores, reflecting Barron's earlier findings on artists' preferences. Scorers look for distinct manifestations of symbolization, where the drawing transcends mere representation to convey deeper, often unconscious, meanings. The capacity for substitution is also vital, indicating the flexibility of thought to replace conventional ideas with unique, imaginative alternatives.

Beyond these formal and symbolic aspects, the scoring system meticulously evaluates the examinee's **goal-directedness** and the emergence of a coherent **personal style**. Goal-directedness refers to the degree to which the drawing appears purposeful and integrated, rather than haphazard or fragmented, even if unconventional. This suggests an ego capable of organizing and channeling creative impulses effectively. The presence of a distinctive personal style is highly valued, as it reflects the individual's unique psychological imprint on their creative output--a hallmark of genuine originality. This style encompasses recurring motifs, preferred forms, unique textures, or characteristic compositional choices that set one drawing apart. The scoring often involves assigning numerical values or categorical classifications to these various components, which are then aggregated to yield an overall creativity score. This numerical representation aims to provide a standardized metric, despite the inherent subjectivity in evaluating artistic expression.

The interpretation of BWAS scores requires consideration of the qualitative aspects that contributed to the final numerical value. A high score typically indicates a strong capacity for creative thought, characterized by a rich inner life, openness to unconventional ideas, and a flexible approach to problem-solving. It suggests an individual who is adept at symbolic expression and capable of transforming unconscious material into novel and meaningful forms. Conversely, lower scores might suggest a more conventional or constrained approach to creative tasks, possibly indicating a preference for established patterns or a lesser inclination towards divergent thinking. It is crucial to remember that the BWAS assesses a particular dimension of creativity--one rooted in psychoanalytic theory and non-verbal expression--and should not be seen as the sole arbiter of an individual's overall creative potential. Interpretation should always be contextualized, considering the individual's background, the testing environment, and in conjunction with other psychological assessments. The insights gleaned from the BWAS are most valuable when they contribute to a broader understanding of an individual's personality and cognitive profile, especially

concerning their unique ways of engaging with and transforming their world.

6. Psychometric Properties: Reliability and Validity

The psychometric properties of the Barron-Welsh Art Scale (BWAS), particularly its reliability and validity, have been subjects of academic scrutiny since its inception. **Reliability** refers to the consistency of a measure--that is, whether it produces similar results under consistent conditions. For the BWAS, inter-rater reliability is a crucial consideration, given the subjective nature of evaluating artistic expressions. Studies have generally shown acceptable to good inter-rater reliability, especially when scorers are adequately trained and adhere strictly to the established scoring manual. This suggests that different trained evaluators can largely agree on the creative dimensions present in a drawing. Test-retest reliability, which assesses the consistency of scores over time, is also important, although creative expression can be influenced by transient moods or experiences. While less extensively reported than inter-rater reliability, existing research generally supports the BWAS's stability over reasonable periods, suggesting that it measures a relatively stable trait of creative potential.

Validity, on the other hand, concerns whether the test actually measures what it purports to measure--in this case, creativity. The BWAS aims to assess a specific facet of creativity tied to psychoanalytic theory and non-verbal expression. **Construct validity** has been investigated through correlations with other established measures of creativity and personality traits. Research has shown that BWAS scores often correlate positively with other tests of divergent thinking, self-reported creativity, and personality traits such as openness to experience, independence, and preference for complexity--characteristics frequently associated with creative individuals. This provides evidence that the BWAS is indeed tapping into a construct related to creativity. Furthermore, its ability to differentiate between known creative groups (e.g., artists, scientists, writers) and non-creative groups provides further support for its construct validity, suggesting it can effectively identify individuals with higher creative potential.

Despite these strengths, the validity of the BWAS is not without its debates. Critics sometimes question the direct link between the drawn manifestations and the underlying Freudian constructs, arguing that the interpretations can be speculative. The inherent subjectivity in interpreting drawings, even with a structured rubric, also presents challenges to fully objective validation. However, the developers and proponents of the BWAS argue that its strength lies precisely in its ability to access a deeper, more unconscious level of creativity that verbal tests might miss. Its non-verbal nature inherently gives it a degree of cross-cultural validity that many language-dependent tests lack, making it applicable to a wider range of populations. While ongoing research continues to refine our understanding of its psychometric properties, the BWAS remains a significant tool for assessing certain dimensions of creativity, particularly those rooted in expressive, symbolic, and personality-driven aspects, providing valuable insights into the complex

nature of human ingenuity.

7. Applications and Research Contexts

The Barron-Welsh Art Scale (BWAS) has found diverse applications across various psychological and educational contexts, primarily as a research tool to identify and understand creative individuals. Its non-verbal nature and independence from age, gender, and IQ make it particularly valuable for studies aiming to investigate the fundamental aspects of creativity across broad demographic spectrums. In **personality research**, the BWAS has been employed to explore the links between creative expression and specific personality traits, such as openness to experience, psychological health, and tendencies towards independence or nonconformity. Researchers have used it to study how creative individuals differ in their cognitive styles, emotional regulation, and overall psychological functioning, often corroborating Frank Barron's initial findings on the characteristics of highly creative people. It has also been instrumental in longitudinal studies tracking the development of creativity over the lifespan.

In **educational psychology**, the BWAS has been utilized to identify creative potential in students, particularly those who might not excel in traditional academic settings or verbal assessments. It offers an alternative perspective on giftedness, recognizing that creativity is a distinct form of intelligence and aptitude that requires different assessment methods. Educators and researchers have used the BWAS to explore the impact of various teaching methods and curricula on creative development, helping to inform pedagogical approaches that foster divergent thinking and artistic expression. Furthermore, its applicability to children makes it a valuable tool for early identification of creative talents, allowing for targeted enrichment programs and support structures. By identifying creativity early, educators can tailor learning experiences to nurture these budding abilities.

Beyond academic settings, the BWAS has seen limited, but notable, application in **clinical psychology** and **career counseling**. In clinical contexts, it can offer insights into an individual's psychological state and capacity for symbolic expression, which can be particularly relevant in art therapy or in understanding the creative coping mechanisms of clients. While not a diagnostic tool, the patterns observed in BWAS drawings can complement other clinical assessments, providing a holistic view of an individual's internal world. In career counseling, particularly for fields requiring innovative thinking or artistic aptitude, the BWAS can serve as one component in a battery of assessments to identify individuals with a strong propensity for creative problem-solving and original thought. Its utility, however, remains predominantly in research, where it continues to contribute to the theoretical understanding of creativity as a complex psychological phenomenon.

8. Comparison with Other Creativity Assessments

The Barron-Welsh Art Scale (BWAS) occupies a unique niche within the landscape of creativity assessment, distinguishing itself from other prominent tools primarily through its non-verbal format and its deep psychoanalytic theoretical underpinnings. The most widely known alternative, the **Torrance Tests of Creative Thinking (TTCT)**, is perhaps the BWAS's closest counterpart in terms of its widespread use and focus on divergent thinking. However, the TTCT includes both verbal and figural (drawing-based) components, with a stronger emphasis on quantifiable metrics such as fluency, flexibility, originality, and elaboration. While both tests aim to measure aspects of divergent production, the TTCT is more overtly focused on the quantity and variety of ideas, whereas the BWAS delves into the qualitative psychological processes and symbolic content underlying artistic expression, offering a more interpretive and less purely numerical assessment.

Other creativity assessments often take different approaches. For example, some tests focus on **problem-solving creativity**, presenting participants with specific problems that require innovative solutions (e.g., the Remote Associates Test or various engineering design challenges). These tests typically measure convergent thinking, or the ability to arrive at a single, best solution through creative means, contrasting sharply with the BWAS's emphasis on open-ended divergent exploration. Similarly, self-report inventories of creativity ask individuals to rate their own creative behaviors, achievements, or personality traits. While these can provide valuable insights into perceived creativity and creative lifestyle, they are susceptible to self-perception biases and do not directly measure the act of creation or the underlying psychological processes in the same way the BWAS does through direct observation of creative output.

The BWAS also stands apart from assessments of **artistic talent or skill**. While a drawing is produced, the BWAS is not evaluating technical proficiency, aesthetic beauty, or adherence to artistic conventions. Its focus is exclusively on the psychological indicators of creativity, such as symbolization and originality, that may or may not be accompanied by high artistic skill. This distinction is crucial, as it allows the BWAS to assess creative potential in individuals regardless of their formal artistic training or innate drawing abilities. In essence, while many creativity tests measure "how much" or "how many" creative ideas one can generate, or "how well" one can solve a creative problem, the BWAS uniquely attempts to uncover "how" an individual's unconscious and ego functions contribute to their creative process through a non-verbal, symbolic medium. This makes it a valuable complementary tool, providing a different lens through which to view the multifaceted phenomenon of human creativity.

9. Criticisms, Limitations, and Modern Relevance

Despite its significant contributions to the study of creativity, the Barron-Welsh Art Scale (BWAS) has faced several criticisms and inherent limitations over its history. A primary concern revolves around the **subjectivity of its scoring process**. While efforts were made to standardize the scoring rubric and ensure inter-rater reliability, the interpretation of artistic manifestations--such as

symbolization, personal style, and goal-directedness--inherently involves a degree of subjective judgment. This can lead to variability in scores across different evaluators, even with training, potentially affecting the consistency and generalizability of results. Critics argue that relying heavily on the interpretation of drawings through a psychoanalytic lens might introduce researcher bias or an over-interpretation of visual cues, making it challenging to establish unequivocally objective measures of creativity. This contrasts with more quantitative creativity tests that offer clearer, more objective scoring criteria.

Another significant limitation pertains to its deep reliance on **Freudian psychoanalytic theory**. While this theoretical foundation provides a rich framework for understanding the unconscious aspects of creativity, it also positions the BWAS within a school of thought that has itself faced considerable challenges and revisions within modern psychology. Contemporary cognitive and neuroscience-based approaches to creativity often focus on different mechanisms, such as executive functions, neural networks, and domain-specific knowledge, which are not explicitly addressed by the BWAS. This theoretical specificity means that the BWAS might not fully capture all facets of creativity as understood by current psychological paradigms, potentially limiting its theoretical breadth in a multidisciplinary field where creativity is increasingly viewed through diverse lenses.

In terms of **modern relevance**, the BWAS, while still recognized in academic literature, is not as widely used in applied settings as more recent or pragmatically oriented creativity tests. Its time-consuming scoring process and the need for highly trained evaluators can be prohibitive for large-scale assessments. However, its unique non-verbal approach and focus on the deeper psychological underpinnings of creativity ensure its continued relevance as a specialized research tool. It remains valuable for studies that specifically aim to explore the qualitative dimensions of creative expression, particularly those influenced by personality and unconscious processes, or in populations where verbal tests are not suitable. The BWAS continues to serve as a reminder that creativity is a multifaceted phenomenon that extends beyond mere cognitive abilities, offering enduring insights into the complex interplay of mind, emotion, and artistic manifestation, even as the field of creativity research evolves with new theoretical perspectives and methodological advancements.

Further Reading

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