

Abstractedness in Art: Meaning & Techniques

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Definition and Conceptual Framework

Abstractedness, in the psychological context, refers fundamentally to a cognitive orientation characterized by the tendency to focus on theoretical, symbolic, and non-concrete concepts rather than immediate, sensory, or practical realities. It represents a crucial dimension of thinking style, governing how an individual processes information, solves complex problems, and interprets the world. This construct is defined by the ability to detach oneself from specific instances and immediate empirical data, allowing for the manipulation of generalized principles, hypothetical scenarios, and universal concepts. High degrees of **abstractedness** facilitate complex intellectual endeavors, such as mathematical modeling, philosophical inquiry, and the formation of grand scientific theories, requiring the mind to operate effectively within realms that possess no direct, immediate physical referent. Conversely, a low level of abstractedness is synonymous with concrete thinking, where thought processes remain bound to the tangible, the observable, and the literal interpretation of facts, often struggling with metaphorical or hypothetical reasoning.

The core mechanism underlying abstractedness involves a process of generalization and categorization. When encountering new information, the abstract thinker automatically seeks to identify underlying structures, common patterns, and overarching rules that unify disparate observations. This process allows for cognitive efficiency; instead of treating every experience as unique, the mind slots the experience into a pre-existing or newly formed theoretical framework. This cognitive detachment is not merely an intellectual capacity but also a personality factor, influencing behavioral choices, communication preferences, and occupational suitability. The differentiation between the concrete and the abstract is critical for understanding human adaptability, as both modes of thought are necessary--the concrete for survival and practical execution, and the abstract for innovation and long-range planning.

Furthermore, abstractedness is deeply intertwined with the concept of cognitive complexity. Highly abstract thought involves managing multiple layers of meaning, recognizing nuances, and maintaining simultaneous awareness of contradictory or competing ideas without immediate pressure for resolution. This contrasts sharply with simplistic or dichotomous thinking patterns often associated with lower levels of abstraction. The psychological utility of abstractedness lies in its predictive power regarding an individual's capacity for foresight and planning. Individuals high in this trait are more likely to anticipate long-term consequences, engage in strategic thinking, and derive satisfaction from intellectual pursuits that demand sustained attention to non-visible structures, such as grammar, logic, or economic principles.

Historical Context and Philosophical Roots

The psychological concept of abstractedness possesses profound roots in classical philosophy, long preceding its formal adoption into empirical psychology. Philosophers grappled with the

distinction between the ephemeral sensory world and the timeless realm of ideas, an intellectual struggle that laid the groundwork for modern psychological inquiry into abstract thought. Plato's Theory of Forms, which posits that the physical world is merely an imperfect shadow of true, eternal, and non-physical Forms (e.g., the Form of Justice or Beauty), is perhaps the most ancient and influential articulation of the priority of abstract concepts over concrete manifestations. Similarly, Aristotle's work on universals and the process of induction--where general principles are derived from specific observations--highlighted the mechanism by which the human mind achieves abstraction. These philosophical traditions established the understanding that true knowledge often resides outside the immediate, direct sensory experience.

Within the early history of psychology, the study of abstract thought gained prominence through the Würzburg School in the late 19th and early 20th centuries. Researchers like Oswald Külpe challenged the prevailing structuralist view that all thought must be reducible to sensory images. Through systematic introspection, they demonstrated the existence of "imageless thought" or "abstract concepts" (such as 'doubt' or 'intention') that could be apprehended directly by consciousness without being tied to specific visual or sensory representations. This groundbreaking work proved that the mind operated with abstract mental sets and determining tendencies, confirming that thinking could occur purely on an abstract level, independent of immediate physical referents, thereby legitimizing the study of abstractedness as a primary psychological phenomenon distinct from simple perception.

The mid-20th century saw the integration of abstractedness into psychometric and personality models. The work of Jean Piaget, though focused on developmental stages, provided a clear framework for observing the emergence of abstract reasoning in children, culminating in the formal operational stage. Concurrently, personality theorists, notably Raymond Cattell, formalized abstractedness as a measurable, stable personality factor. Cattell's inclusion of this factor (Factor M) within the 16 Personality Factor (16PF) model solidified its status not merely as a measure of cognitive capacity (like intelligence) but as a fundamental dimension of temperament and characteristic style, differentiating between the imaginative, theoretic individual and the grounded, practical one. This historical trajectory illustrates the evolution of abstractedness from a philosophical puzzle to a measurable, empirically verifiable psychological trait.

Abstractedness within Cognitive Psychology

In contemporary cognitive psychology, abstractedness is primarily studied through the lens of dual-process theories, which distinguish between two fundamental modes of thought: System 1 (fast, intuitive, automatic, and often concrete) and System 2 (slow, effortful, analytical, and abstract). High abstractedness is deeply associated with the efficient operation of System 2 thinking, demanding significant cognitive resources, particularly working memory capacity and executive function control. Abstract reasoning requires the inhibition of irrelevant concrete details and the

sustained manipulation of symbolic representations, placing high demands on the prefrontal cortex. This mode of processing allows individuals to engage in counterfactual thinking--imagining scenarios that contradict current reality--which is a hallmark of sophisticated abstract thought and critical for planning and strategic decision-making.

Abstractedness plays a central role in complex problem-solving, particularly those requiring analogical reasoning. Analogical reasoning involves recognizing structural similarities between two disparate domains (e.g., comparing the structure of an atom to the structure of the solar system). This process is inherently abstract because it demands the extraction of underlying relational patterns while ignoring superficial, concrete differences between the objects being compared. An individual low in abstractedness may struggle to move past the surface features, rendering analogical transfer difficult or impossible. Conversely, a high level of abstractedness allows for the swift identification of deep structural isomorphisms, enabling creative leaps and the application of learned solutions to novel, seemingly unrelated problems.

Furthermore, the manifestation of abstractedness is evident in language processing, specifically in the comprehension and use of metaphorical and figurative language. Abstract thinkers easily grasp the symbolic meaning behind idioms, parables, and complex metaphors because they habitually process language at a conceptual level, moving beyond the literal word meanings. Cognitive research suggests that abstract concepts (like 'truth' or 'freedom') are stored and retrieved differently in the brain than concrete concepts (like 'chair' or 'apple'), often relying more heavily on linguistic and relational networks than on sensorimotor representations. The ease with which an individual navigates these complex linguistic structures is a direct reflection of their developed capacity for abstractedness, making it a powerful predictor of academic success in fields requiring high levels of verbal and symbolic reasoning.

The Role of Abstractedness in Personality Theory

Abstractedness is perhaps most famously operationalized as Factor M ("Abstractedness" versus "Practicality") within Raymond Cattell's 16 Personality Factor (16PF) model, positioning it as a core source trait. This factor measures the degree to which an individual is guided by internal, imaginative, and theoretical interests as opposed to external, practical, and concrete demands. Individuals scoring high on **Abstractedness (High M)** are typically described as imaginative, unconventional, theoretical, absent-minded, and preoccupied with internal mental life. They often enjoy fantasy, artistic pursuits, and dealing with abstract ideas, sometimes at the expense of attention to immediate, practical details or social conventions.

Conversely, individuals scoring low on Abstractedness (Low M), often labeled as **Practicality**, are grounded, conventional, realistic, and concerned with immediate, tangible facts. They prefer dealing with things as they are, focusing on practical applications, efficiency, and adherence to

established rules and procedures. While the high-M individual might excel in areas requiring invention and conceptual synthesis, the low-M individual is highly effective in roles demanding meticulous attention to detail, execution, and reliable implementation. It is crucial to understand that neither end of the spectrum is inherently superior; rather, they reflect different cognitive styles and sources of motivation.

The inclusion of Abstractedness as a personality factor highlights its stability and pervasive influence across various life domains, differentiating it from mere state-based cognitive performance. This trait influences vocational choice, with high-M individuals gravitating towards fields such as research, art, design, and theoretical sciences, while low-M individuals are often found in engineering, administration, skilled trades, and management roles requiring operational efficiency. Furthermore, abstractedness affects interpersonal communication; high-M individuals may struggle to connect with others on mundane topics, preferring discussions about abstract ideals or hypothetical scenarios, which can sometimes lead to perceptions of being detached or "in their own world."

Measurement and Assessment Tools

The measurement of abstractedness utilizes both cognitive performance tasks and self-report personality inventories, providing a comprehensive view of both the capacity for and the habitual use of abstract thought. One of the primary cognitive assessment methods is the use of subtests within general intelligence batteries, such as the Similarities subtest found in the Wechsler Adult Intelligence Scale (WAIS) and Wechsler Intelligence Scale for Children (WISC). In this subtest, the examinee is asked to explain how two seemingly different items are alike (e.g., "How are a dog and a lion alike?"). Concrete answers (e.g., "They both have four legs") receive lower scores, while abstract, categorical answers (e.g., "They are both mammals" or "They are both animals") receive higher scores, directly measuring the ability to derive an abstract principle or category.

In the realm of personality assessment, the 16PF Questionnaire is the definitive instrument for measuring abstractedness as a trait, specifically through Factor M. The items designed to assess this factor require the respondent to choose between statements reflecting imaginative, theory-driven interests and statements reflecting practical, conventional preferences. For example, a high-M response might endorse a statement like "I enjoy reading science fiction" over a low-M response like "I prefer practical books on how to fix things." The reliability of these personality measures allows researchers and clinicians to predict an individual's preferred intellectual environment and typical problem-solving approach.

Beyond standardized tests, projective techniques, such as the Rorschach Inkblot Test, can also provide qualitative insights into a person's level of abstraction. Responses that focus on synthesizing the entire blot into a coherent, generalized concept (whole responses) often suggest a

higher capacity for abstract integration compared to responses fixated only on small, specific, concrete details. Furthermore, clinical interviews often assess abstractedness by observing the patient's ability to interpret proverbs (e.g., "A rolling stone gathers no moss"). A concrete interpretation (e.g., "The stone keeps moving so stuff can't stick to it") indicates low abstractedness, whereas a metaphorical interpretation (e.g., "A person who constantly changes jobs never establishes roots or gains security") demonstrates high abstractedness.

Clinical Implications and Maladaptive Abstractedness

The capacity for abstraction is a critical indicator of psychological health and cognitive flexibility, and disruptions in this ability are often symptomatic of various clinical conditions. The most recognized clinical manifestation related to abstractedness is the phenomenon of severe concrete thinking, or the inability to abstract, which is frequently observed in individuals suffering from schizophrenia and certain organic brain disorders (e.g., dementia, traumatic brain injury). For individuals with schizophrenia, the difficulty in shifting from concrete to abstract thought processes contributes to difficulties in social understanding, interpretation of humor, and adherence to complex instructions, as they often take figurative language literally. This cognitive rigidity compromises their ability to engage in adaptive, flexible reasoning necessary for navigating complex social environments.

Conversely, while high abstractedness is generally associated with advanced intellect, an excessive or maladaptive reliance on abstract thought can also be clinically problematic. This often manifests as **over-intellectualization**, a defense mechanism identified in psychodynamic theory, where the individual uses abstract reasoning, logic, and jargon to distance themselves emotionally from painful, threatening, or overwhelming concrete realities. By retreating into the theoretical or the philosophical, the individual avoids processing the immediate, affective components of a situation. While providing temporary emotional relief, chronic over-intellectualization can impede genuine emotional connection, hinder effective coping, and lead to a sense of emotional detachment or alienation.

Understanding the individual's level of abstractedness is vital in therapeutic settings. Cognitive Behavioral Therapy (CBT), for instance, often requires clients to identify abstract cognitive distortions (e.g., global labeling or catastrophic thinking) and replace them with more balanced, realistic assessments. Patients with extremely low abstractedness may struggle with this process, requiring the therapist to use highly concrete, step-by-step, and behavioral interventions. In contrast, highly abstract patients may readily grasp the theoretical framework of CBT but resist applying the concepts to their messy, concrete daily lives, requiring the therapist to actively bridge the gap between abstract understanding and practical execution.

Developmental Trajectories of Abstract Thought

The development of abstractedness is a phased process heavily influenced by maturation, education, and cultural exposure, following predictable trajectories outlined primarily by Jean Piaget's theory of cognitive development. The crucial transition occurs during adolescence, marking the shift from the concrete operational stage (which focuses on tangible objects and events) to the **formal operational stage**. This transition, typically beginning around age 11 or 12, allows the individual to reason about hypothetical propositions, manipulate abstract symbols (like algebraic variables), and engage in systematic, scientific reasoning that considers all possibilities, even those contrary to fact.

Prior to formal operations, children struggle significantly with concepts that lack immediate perceptual support. For instance, younger children may fail to understand complex moral dilemmas that require hypothetical role-taking or concepts like 'infinity' or 'justice' outside of specific examples. The maturation of the frontal lobes during adolescence is a key biological driver for the emergence of robust abstract thought, providing the necessary neurological infrastructure for sustained executive function and working memory capacity required for complex manipulation of non-concrete data. This developmental leap is not instantaneous; rather, abstract reasoning abilities are refined throughout adolescence and into early adulthood, becoming more consistent and sophisticated across various domains.

However, it is important to note that the attainment of the formal operational stage is not universal, nor is it consistently applied across all contexts. Educational opportunities and cultural practices play a significant role in scaffolding abstract skills. Environments that encourage debate, philosophical inquiry, and scientific experimentation tend to foster higher levels of abstractedness. Conversely, contexts focused exclusively on rote memorization or immediate practical tasks may inhibit the full development or frequent utilization of abstract skills. The continuous refinement of abstractedness throughout life is essential for lifelong learning, adaptation to novel environments, and the ability to critically evaluate complex societal issues.

Abstractedness vs. Related Constructs

To fully understand abstractedness, it is necessary to differentiate it clearly from related but distinct psychological constructs, primarily general intelligence (g), conceptual fluency, and creativity. While often correlated, **abstractedness is fundamentally a thinking style or preference**, whereas general intelligence (g) is typically defined as the overall capacity or efficiency of cognitive processing. High intelligence often facilitates high abstractedness, as complex abstract tasks require high cognitive capacity. However, a highly intelligent individual may still possess a personality preference for practical, concrete application (low M on the 16PF), choosing to focus their intellectual energy on observable facts rather than theoretical speculation. Conversely, an

individual of moderate intelligence might exhibit a strong preference for abstract thought, dedicating their mental efforts to imaginative or symbolic pursuits.

Conceptual fluency, or the ability to generate numerous ideas within a specific category, is also distinct. While abstract thinkers often demonstrate high conceptual fluency, the latter is a measure of speed and volume of retrieval, whereas abstractedness measures the depth and level of generalization in the concepts themselves. For example, both an abstract and a concrete thinker could list many uses for a brick (high fluency), but the abstract thinker is more likely to propose symbolic or metaphorical uses (e.g., "a symbol of structural integrity"), while the concrete thinker lists primarily literal uses (e.g., "building a wall," "a doorstep").

Finally, the relationship between abstractedness and creativity is complex. Creativity involves both the generation of novel ideas and their practical implementation. Abstractedness provides the essential ingredient of imaginative thinking--the ability to conceive of possibilities beyond current reality and synthesize disparate concepts--which is crucial for the novelty component of creativity. However, creativity also requires a degree of practicality (low abstractedness) to transition the abstract idea into a feasible, concrete product or solution. Thus, truly effective creativity often involves a balanced ability to oscillate between high abstractedness (for ideation) and high practicality (for execution), utilizing abstractedness as the engine of conceptual innovation.