

CONCEALED-FIGURES TEST

Authored by
mohammad looti

November 8, 2025

RECOMMENDED CITATION

mohammad looti (2025). *CONCEALED-FIGURES TEST*. PSYCHOLOGICAL SCALES.
Retrieved from <https://scales.arabpsychology.com/?p=65592>

CONCEALED-FIGURES TEST

Primary Disciplinary Field(s): Psychology (Perception, Cognitive Assessment, Differential Psychology)

1. Core Definition

The **Concealed-Figures Test (CFT)** is a specialized psychometric instrument designed to assess an individual's perceptual ability to separate a simple visual component from a complex, distracting background. Functioning as an analysis based on perception, the test requires the participant to identify specific geometric shapes that are elusive or deliberately concealed by other superimposed or integrated forms. The fundamental cognitive operation measured by the CFT is often termed **disembedding**--the capacity to overcome the organizational pull of the overall visual field in favor of analytical focus on its component parts. Success on the CFT is dependent upon the ability to restructure or reorganize a visual stimulus, effectively inhibiting the naturally occurring tendency to perceive the image as a single, unified Gestalt.

Unlike tests measuring general visual acuity or simple pattern recognition, the CFT specifically targets the individual's cognitive style concerning global versus analytical processing. Performance is typically gauged not only by the accuracy of identification but also by the speed required to locate the concealed figure, providing a reliable measure of perceptual efficiency in visually demanding contexts. This assessment tool provides crucial insight into an individual's cognitive approach to problem-solving, learning, and environmental interaction, distinguishing it from purely intelligence-based measures.

2. Theoretical Basis: Gestalt Psychology and Field Dependence

The theoretical foundation of the Concealed-Figures Test is deeply rooted in **Gestalt psychology**, which postulates that the human mind organizes sensory input into coherent, meaningful wholes based on principles like proximity, similarity, and closure. In the CFT, the complex figure is designed to maximize the Gestalt principles, compelling the viewer to see the "whole." The test subject must actively resist this holistic organization to analytically break down the image and locate the hidden element, a process that requires considerable cognitive effort for some individuals.

Furthermore, the CFT serves as a primary measure for the cognitive dimension known as **Field Dependence-Independence (FDI)**, a construct pioneered by psychologist Herman Witkin. FDI describes stable individual differences in how people perceive information and interact with their environment. Individuals classified as **field-dependent** tend to rely heavily on the external visual field or context for orientation, struggling to separate the simple figure from the distracting

background. Conversely, **field-independent** individuals possess superior analytical abilities, allowing them to easily disembed the target shape, relying less on the overall context and demonstrating a greater capacity for cognitive restructuring.

The measurement of FDI through the CFT has significant implications beyond simple visual tasks. Witkin's extensive research demonstrated that this perceptual style correlates with broader aspects of personality, social behavior, and preferred learning methods. Field independence is generally linked to an analytical, impersonal cognitive approach, while field dependence is associated with a more global, socially attentive, and integrated approach to processing information.

3. Historical Context and Development

The precursors to the modern Concealed-Figures Test can be traced back to early experiments in perceptual psychology, most notably the work by German psychologist Kurt Gottschaldt in the 1920s. Gottschaldt designed figures to explore the laws of perceptual organization, demonstrating that simple shapes embedded within complex patterns often lose their individual identity. These **Gottschaldt figures** provided the initial experimental framework for studying disembedding abilities.

The standardized, widely used version of the CFT emerged primarily from the research program of Herman Witkin and his colleagues beginning in the 1940s. Witkin's initial research into FDI utilized tests like the Rod-and-Frame Test (RFT) and the Body Adjustment Test (BAT), which involved physical orientation. However, the need for a purely visual, easily administered, and standardized paper-and-pencil measure led to the development of the **Embedded Figures Test (EFT)**, which became the definitive instrument for measuring the field dependence-independence cognitive style. The historical evolution of the test transitioned the study of perceptual style from a laboratory curiosity into a robust variable in differential psychology.

4. Key Characteristics and Methodology

The methodology of the Concealed-Figures Test relies on presenting a participant with a series of distinct plates or cards. Each plate features a complex figure--a visually rich, often abstract drawing--that contains one or more smaller, simpler geometric figures that the participant was shown previously.

Key characteristics defining the administration and scoring of the CFT include:

Complexity of Stimuli: The distracting background must be intricate enough to naturally encourage the perception of the whole (the Gestalt) while simultaneously making the boundaries of the simple figure ambiguous or visually merged.

Time Constraint: Most standardized versions, particularly the Group Embedded Figures Test

(GEFT), impose strict time limits, measuring not just the ability to locate the figure but the efficiency and speed of the analytical process.

Scoring: Scores are determined by the total number of simple figures correctly identified and disembedded. Higher scores indicate greater field independence and superior analytical cognitive restructuring skills.

Individual vs. Group Administration: While the original EFT was administered individually, the development of the GEFT allowed for broad application in educational and research settings, making the assessment of field independence more scalable.

5. Specific Test Instruments

Several standardized variations of the Concealed-Figures Test exist, tailored for different age groups and contexts, all fundamentally measuring the disembedding ability:

The Embedded Figures Test (EFT): The classic, individually administered version used primarily for detailed clinical assessment and research with adults. It typically involves around 24 complex figures and requires the subject to trace or point out the hidden shape.

The Group Embedded Figures Test (GEFT): Designed for simultaneous administration to large groups, the GEFT consists of fewer items and uses a multiple-choice format, sacrificing some depth of individual measurement for efficiency and ease of scoring in educational or corporate settings.

The Children's Embedded Figures Test (CEFT): Adapted specifically for children, the CEFT simplifies the visual complexity and often utilizes a different format, such as presenting the simple figure alongside the complex figure for ease of visual comparison, making it more accessible for younger subjects.

The Preschool Embedded Figures Test (PEFT): Further simplified for very young children, this version helps identify perceptual styles early in development, often using easily recognizable objects or colored shapes rather than purely abstract geometric figures.

The choice of instrument depends heavily on the specific research question, the age and cognitive level of the population being tested, and the required level of detail regarding the individual's perceptual processing speed and accuracy.

6. Clinical and Educational Applications

The application of the CFT extends widely into clinical and educational psychology, providing a valuable metric for understanding cognitive barriers and tailoring interventions. As noted in clinical literature, "The **concealed-figures test** is helpful in some forms of **child therapy**."

In educational contexts, the CFT helps identify students who may struggle with analytical tasks required in subjects like mathematics, engineering, or certain sciences, as these fields often

demand strong field-independent skills. Educators can use these results to adapt teaching strategies, providing field-dependent students with more structured guidance and explicit cues to help them isolate key information from contextual noise. Conversely, field-independent students often thrive in self-directed learning environments and abstract problem-solving tasks.

In clinical settings, the test assists in assessing perceptual disturbances related to neurological conditions or learning disabilities. Difficulties in disembedding may indicate impairments in visual-spatial processing or executive functioning. Therapists utilize the CFT results to guide cognitive restructuring exercises, helping clients develop strategies to improve their analytical approach to visual and contextual information, thereby potentially alleviating certain forms of cognitive distress or learning difficulties.

7. Significance and Interpretive Value

The significance of the Concealed-Figures Test lies in its power as a predictor of behavior and vocational success across various domains. Field-independent individuals often demonstrate superior performance in tasks requiring technical analysis, spatial manipulation, and non-social problem-solving. This includes proficiency in fields like architecture, medicine (especially surgery), and scientific research, where the ability to disembed crucial data from complex presentations is paramount.

Furthermore, the CFT provides insight into interpersonal style. Field-independent individuals are often described as more autonomous, relying on internal frames of reference, while field-dependent individuals are typically more socially oriented, attentive to social cues, and reliant on external validation or consensus. The test helps vocational counselors match an individual's dominant cognitive style to career pathways that best utilize their natural perceptual strengths, maximizing job satisfaction and performance. The data derived from the CFT thus offer a comprehensive profile of how an individual processes their world--analytically or globally--a dimension often orthogonal to measures of general intelligence.

8. Debates, Limitations, and Criticisms

Despite its extensive history and utility, the Concealed-Figures Test, and the FDI construct it measures, is not without criticism. A primary debate centers on the **construct validity**: critics argue whether the CFT measures a unique cognitive style distinct from general intelligence (IQ) or specific spatial reasoning abilities. While Witkin argued for its independence, correlations between CFT performance and certain measures of spatial visualization remain significant, leading some to classify it simply as a specialized spatial test rather than a fundamental cognitive style marker.

Another limitation concerns potential **cultural bias**. Performance on the CFT may be influenced by cultural backgrounds that prioritize different styles of learning and perception. Societies that

emphasize holistic thinking or social interdependence might inadvertently produce more field-dependent individuals, suggesting that the test results must be interpreted cautiously across diverse populations. Finally, while FDI is largely considered a stable trait, the degree to which performance on the CFT can be modified through training remains a subject of debate, which complicates its use as a purely fixed psychological measure.

Further Reading

[Embedded Figures Test \(EFT\)](#)

[Field Dependence and Independence \(FDI\)](#)

[Witkin, H. A., Oltman, P. K., Raskin, E., & Karp, S. A. \(1971\). A Manual for the Embedded Figures Tests.](#)

[Psychology Dictionary Entry: CONCEALED-FIGURES TEST](#)