

# Contextualizing Gestalt Contributions towards Creativity Research in the Inter-War Period

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## Abstract

*This work attempts to situate the significant contributions of Gestalt Psychology to creativity research. It attempts to map the disciplinary milieu and intellectual zeitgeist, focusing on paradigm positions and school formations in the inter-war period. The dynamics of research production in psychology are incomplete without the historical context of its prominent schools' relative positioning and discourses. Disciplinary production includes the work of Behaviourism, Neo-behaviourism, Personality psychology, Psychoanalysis, and Gestalt psychology. The institutional milieu was animated by the development of the American Psychology, APA's associative class membership program, and the war-impact. The significant Gestalt contributions identified are Insight generation and problem-solving, Functional fixedness, and reproductive-productive thinking. Such early attempts provided the necessary momentum and acted as a resource material for the flourishing of creative research in the post-1950's.*

**Keywords** – *Gestalt contributions, creativity, functional fixedness, insights*

## Introduction

After the first World War, psychology in the United States caught the imagination of the public for many reasons. The magazines and newspapers reported the contributions of psychologists in the army testing program. The measurement of abilities, intelligence, and aptitudes was new to the public. Experts of American psychology like Robert Yerkes, Grace Adams, and John Watson used public mediums like newspapers, magazines, and radio to interact with the public. According to Pickren & Rutherford, the public's psychological mindedness helped in the popular reception of psychology[6]. Both professionals and non-professionals wrote in popular magazines on topics of Psychology. Often the professional and academic psychologists who approached psychology through neo-behavioral methods discredited the non-professional works.

The disciplinary psychology in America developed a therapeutic flavor of helping people get their issues in personal, professional, and social life. The focus was also on positive self-esteem and self-confidence rather than on philosophical debates in some European regions. The academic circles were dominated by behaviorism and neo-behaviorism, whereas psychoanalysis was popular among the public. According to Pickren & Rutherford, there is a massive psychologization of every aspect of a person's life due to the rising consumerism in American

society[6]. Psychology has grown into organizations, workplaces, hospitals, nurseries, schools, clinics, and radio stations.

The need for manageable workers created the space for the growth of psychology in industries. The growth of organizations among psychologists became an essential aspect of developing an organized science. This professional organization also contributed to the development of a mainstream approach. APA was established in the year 1892, but the membership was minimal. The associative class of memberships started in 1926. Associates have no voting rights, but membership in this category increased with the year. They have the tag of APA, which helped one's reputation. The associates were engaged in Applied psychology work in education, clinic, consulting, and schools.

Many new associations emerged to cater to the needs of applied psychologists. The Association of Consulting Psychologists became the American Association for Applied Psychology. The new organizations dealt with licensing, training, and certifications of applied psychologists. AAAP was later absorbed into APA. Psychologists League and Society for the Psychological Study of Social Issues were formed in the aftermath of the Great Depression. The employment crisis during the Great Depression created employment difficulties for psychologists. These organizations helped to find work for emerging psychologists.

Neo-behaviorism became the established experimental and philosophical tradition of Psychology during this period. This approach tried to establish the stimulus-response laws in organisms. In North America, the laboratories experimented with Albino rodent rats, and the studies focus on their responses to varied conditions. The Learning defined as the adaptations of rodents in experimental conditions was thought as universal and significant to human behavior. A tiny proportion of scientists were working on reaction-time methods and introspection to study mental processes. By the 1920s mainstream of American psychology shifted to behaviorism. Only a very few researchers were working according to the functionalist and structuralist approach. By the 1930s, neo-behaviorism became dominant in academics. The new approach introduced Operationism and Logical positivism to Behaviourism. According to operationism principles, any concept to be studied must be defined on how to measure it precisely. There are many champions of Neo-Behaviourism; the significant contributors are Hull and Tolman.



There were significant contributions to personality psychology during the inter-war period. The popular theories of personality of the times were the theories of William H. Sheldon and Ernst Kretschmer and the Psychodynamic theories of Carl Jung and Sigmund Freud. Later with Gordon Allport's entry into academic circles, Personality research came into the domain of research and application. The Woodworth Personal Data Sheet developed by Woodworth in 1917 is regarded as the first test of personality by an American Psychologist. Later this was followed by the Test of Ascendance-Submission by Golden Allport in 1928.

Another significant milestone in developing the Minnesota Multiphasic Personality Inventory (MMPI) in 1943 by Starke R. Hathaway and J. C. McKinley of the University of Minnesota. The test identifies psychopathology states and personality traits such as depression, psychosis, masculinity, and femininity by administering a series of true or false questions. Rorschach Test and other psychodynamic tests were vague to interpret and more time consuming than MMPI. Another significant development of the 1930s is the publication of the Thematic Apperception Test (TAT). The test developed in Harvard clinic by Henry Murray and Christiana A. Morgan asks the subjects to develop a story based on ambiguous pictures. The psychodynamic principle underlying the test is that the person will construct the story based on past experiences with present motivations, both in conscious and unconscious level, with fewer defenses to the examiner.

Personality tests were also used in industries to assess, recruit, and evaluate workers. The inter-war period witnessed a worker's mobilization throughout the world inspired by events such as the spread of communism, the Bolshevik revolution's success, and the Great Depression of the 1930s. The industrial and political class in the U.S. feared the spreading of communism. The role of Psychology in the industry was to identify the workers' maladjustment while not responding much to the larger structural Problem the world witnessed and debated. The Bernreuter Personality Inventory and the Humm-Wadsworth Temperament Scale were used to assess the personality of workers.

The famous Hawthorne Experiments, which later became the basis of worker's management research, were done in the 1930s in Western Electric Company by Elton Mayo. The research involved manipulating the rest periods, lunch periods, payment schemes, and lighting conditions to see productivity changes. Mayo concluded that informal social patterns determine the productivity of workgroup. Later many studies were conducted similar to Hawthorne studies, and industries began to encourage personal consultants or workplace counselors in their workforce.

American Psychologist Clark Leonard Hull (1884-1952) is a neo-behaviorist who developed a general theory of behavior in testable hypotheses in a logical

positivist paradigm. His early work was on concept formation. American Psychologist Edward Tolman (1886-1959) maintained that maze experiments using rats would help study psychological situations or problems. He discovered Cognitive maps. According to Tolman, Learning is not just stimulus-response pairing, but Learning happens latently, which he termed as latent Learning.

Psychoanalysis emerged as a strong school in the United States and Europe in the first half of the 20<sup>th</sup> century. Its influence in other regions such as Latin America or Asia came much later. It should be noted that during this period, schools of Behaviourism and Gestalt coexisted as different centers. Gestalt school researched much on insight generation in problem-solving. The intellectual zeitgeist within the period's discipline was oriented towards understanding learning by rigor experimental and empirical study. Area of Learning was also an area where there was conflicting production of scientific studies.

Watson was apprehensive of the metaphysical nature of consciousness and saw the futility in the same scientific study. The behaviorist tradition of Watson, Pavlov, Thorndike rejected introspection as a study of consciousness. Pavlov's discovery of conditioned reflexes opened the scope for exploring behavior in their terms to behaviorists. The school emerged strongly during the Inter-War period and dominated academic circles, whereas psychoanalysis existed in its strongholds and was favored in the public imagination. Freud's contributions to creativity come in this period too. Gestalt psychologists produced significant contributions in the area of perception and sensory organization. A study on insight generation by Kohler is significant to the history of creativity.

The German word 'Gestalt' translates into qualities of whole, pattern, or configuration. The Gestalt school of psychology was radically different in the conceptions of mental processes compared to experimental psychology's orientation towards sensory experimentation. The Gestaltists saw the Problem of creative thinking and problem-solving as functions of perception and insights. Several breakthroughs in problem-solving and creativity, such as the studies on insight generation, productive thinking, and functional fixedness, came from the Gestalt school of thought.

Insights provided by Wolfgang Kohler established the significance of perception in the question of problem-solving. He established that internal mental reconfiguration is important to find a solution to a problem. The *Mentality of Apes*, published in 1917 by Wolfgang Kohler, provided several insights into the nature of problem-solving. Kohler, a scholar in Gestalt tradition, argued that problem-solving in animal behavior is not a result of trial-and-error as postulated by Thorndike but a case of insight generation ([4], [5]). He chose chimpanzees for his experiment owing to the similarity of brain structure and certain observable traits with humans. He

took a critical stance on behaviorism in that it avoids covert behavior such as heartbeat and blood pressure for overt actions.

Identification of functional fixedness by Karl Duncker ([1], [2], [3]) showed complexities in productive thinking. It is a mental block and cognitive bias of not trying alternative ways by sticking to traditional patterns, experienced by a person on solving problems. His experiments, such as the candle problem and radiation problem, showed that lack of flexibility in thinking brings down problem-solving. His works, such as the *On Problem Solving* (1935/1945), were in line with Gestalt tradition.

Max Wertheimer differentiated between Reproductive thinking and Productive thinking. His ideas are published in the book *Productive Thinking* published posthumously in 1945. His early interests were in Laws of sensory organization, perception, and Gestalt theory (see [7] [8]). Max Wertheimer, one of the founders of Gestalt Psychology, came to the United States in 1933 due to Nazi politics in Germany. In Germany's early years, he taught at the University of Frankfurt and Berlin Psychological Institute and the later years in the New School of Social Research in New York City. The works on productive thinking came in the latter part of his life after emigrating to the United States. Reproductive thinking is repetition, habits, and conditioning, whereas productive thinking brings insights, new ideas, real understanding, and clarity. The laws of logic and the laws of thoughts are different and need to be differentiated. He rejected the classroom practices of rote Learning as it is habitual and imitative and placed importance on creative and productive thinking.

Karl Duncker studied productive thinking by providing college students with problems and asking them to derive a solution by thinking aloud. He undertook training in gestalt psychology under Kofka, Kohler, and Wertheimer in Berlin. Later, Dunker found a position in Cambridge after being extradited by Nazis in Germany.

According to him, the method of thinking out loud is not introspection, as, in the latter, the subject itself is hearing oneself. If the goal cannot be met by action, thinking is employed to reach the goal. In this context, Productive thinking is successful thinking in reaching the goal. In his famous work, *On Problem Solving* (1945), he argued that fixation prevents insights. Successful Problem solving depends on overcoming the fixation. Later, Catherine Patrick also used thinking out loud to examine the creative process in her study titled Creative thought.

### Conclusion

The Gestalt contributions were focussed directly on aspects like problem-solving and perception. The methodological and epistemological orientation towards perceptual reorganization is very visible in the general tenets of gestalt contributions. However, situating these contributions in the historical timeframe provides clarity in intellectual debates, disciplinary milieu, zeitgeist, and historical location. Gestalt psychologists dismissed trial-and-error Learning of skinner with the help of Insight generation studies by Kohlar. The extensive experiments in Problem solving, perception, insight generation, pattern recognition made a decisive impact and helped in the advancement of creativity research post-1950s.

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