Wolfgang Köhler was born in Revel, Estonia, and grew up in Wolfenbüttel, Germany. He studied at the universities of Bonn and Tübingen, and at the Friedrich Wilhelm University of Berlin, where he received his Ph.D. in 1909, writing a dissertation on psychoacoustics under the direction of Carl Stumpf (1848-1936). In 1910, Köhler began a long professional association with Max Wertheimer (1880-1943) when he and Kurt Koffka (1886-1941), both assistants to Friedrich Schumann at the University of Frankfurt, served as research subjects for an experiment of Wertheimer’s involving perception of moving pictures. Within the next ten years, the three men were to found the Gestalt movement in psychology. In reaction to the prevailing behavioristic methods of Wilhelm Wundt (1832-1920) and others, the Gestalt psychologists held that behavior must be studied in all its complexity rather than separated into discrete components. Köhler’s early work convinced him that perception, learning, and other cognitive functions should be seen as structured wholes.

Unlike Koffka and Wertheimer, Köhler concentrated on animal research. Beginning in 1913, he spent more than six years as director of the anthropoid research facility of the Prussian Academy of Sciences on the island of Tenerife, where he made many discoveries applying Gestalt theories to animal learning and perception. His observations and conclusions from this period contributed to a radical revision of learning theory. One of his most famous experiments centered on chickens which he trained to peck grains from either the lighter or darker of two sheets of paper. When the chickens who had been trained to prefer the light color were presented with a choice between that color and a new sheet that was still lighter, a majority switched to the new sheet. Similarly, chickens trained to prefer the darker color, when presented with a parallel choice, chose a new, darker color. These results, Köhler maintained, showed that what the chickens had learned was an association with a relationship, rather than with a specific color. This finding, which flew in the face of behaviorist theories deemphasizing the importance of relationships, became known as the Gestalt law of transposition, because the test subjects had transposed their original experience to a new set of circumstances.

Köhler also conducted a series of experiments in which chimpanzees were confronted with the problem of obtaining bananas that were hung just out of reach by using “tools”—bamboo poles and stacked boxes. The chimpanzees varied in their ability to arrive at the correct combination of actions needed to solve the problem. Often, a test subject would suddenly find a solution at a seemingly random point. This research led Köhler to the concept of learning by a sudden leap of the imagination, or “insight,” in which a relationship that had not been seen before was suddenly perceived, a formulation in conflict with the trial-and-error theory of learning resulting from Edward Thorndike’s puzzle box experiments. Based on this work, Köhler published The Mentality of Apes in 1917, demonstrating that Gestalt theory could be applied to animal behavior.

Köhler returned to Germany after World War I, and in 1921 was appointed to the most prestigious position in German psychology, director of the Psychological Institute at the University of Berlin. For the next 14 years he made the Institute a center for Gestalt studies and was a noted spokesman for the movement. In 1935, however, Köhler resigned due to conflicts with the Nazis, and emigrated to the United States, where he served on the faculties of Swarthmore and Dartmouth Colleges. In 1959, he was appointed president of the American Psychological Association. There has been some speculation that he was a spy during World War I, a thesis explored by his biographer, Ronald Ley. Köhler’s books include Gestalt Psychology (1929), The Place of Value in a World of Facts (1938), and Dynamics in Psychology (1940).

See also Behaviorism; Cognitive development; Gestalt psychology.
Further Reading

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**Emil Kraepelin**

1856–1926

German experimental psychiatrist who classified types of mental illness and studied their neurological bases.

Emil Kraepelin was a pioneer in the development of psychiatry as a scientific discipline. He was convinced that all mental illness had an organic cause, and he was one of the first scientists to emphasize brain pathology in mental illness. A renowned clinical and experimental psychiatrist, Kraepelin developed our modern classification system for mental disease. After analyzing thousands of case studies, he introduced and defined the terms “dementia praecox” (schizophrenia), “manic-depressive psychosis,” and “paranoia.” As a founder of psychopharmacology, Kraepelin’s experimental work focused on the effects of intoxicants on the central nervous system, on the nature of sleep, and on the effects of fatigue on the body.

Kraepelin, the son of a civil servant, was born in 1856 in Neustrelitz, in the Mecklenburg district of Germany. He was first introduced to biology by his brother Karl, 10 years older and, later, the director of the Zoological Museum of Hamburg. Kraepelin began his medical studies at 18, in Leipzig and Wurzburg, Germany. At Leipzig, he studied psychology with Wilhelm Wundt and wrote a prize-winning essay, “The Influence of Acute Illness in the Causation of Mental Disorders.” He received his M.D. in 1878.

Publishes first edition of his psychiatry compendium

In 1879, Kraepelin went to work with Bernhard von Gudden at the University of Munich, where he completed his thesis, *The Place of Psychology in Psychiatry*. Returning to the University of Leipzig in 1882, he worked in W. Erb’s neurology clinic and in Wundt’s psychopharmacology laboratory. His major work, *Compendium der Psychiatrie*, was first published in 1883. In it, he argued that psychiatry was a branch of medical science and should be investigated by observation and experimentation like the other natural sciences. He called for research into the physical causes of mental illness and established the foundations of the modern classification system for mental disorders. Kraepelin proposed that by studying case histories and identifying specific disorders, the progression of mental illness could be predicted, after taking into account individual differences in personality and patient age at the onset of disease. In 1884 he became senior physician in Leubus and the following year he was appointed director of the Treatment and Nursing Institute in Dresden. In 1886, at the age of 30, Kraepelin was named professor of psychiatry at the University of Dorpat. Four years later, he became department head at the University of Heidelberg, where he remained until 1904.

Following the experimental protocols he had learned in Wundt’s laboratory, Kraepelin examined the effects of alcohol, morphine, and other drugs on human subjects. Applying Wundt’s association experiments to psychiatric problems, Kraepelin found that the associations made by psychotic patients were similar to those made by fatigued or intoxicated subjects. In both cases, the associations tended to be superficial and based on habit rather than on meaningful relationships. Kraepelin also made a study of primitive peoples, and he examined the frequency of insanity and paralysis in tropical regions. His research on mental illness led him to speak out for social reforms. He crusaded against the use of alcohol and against capital punishment, and he spoke out for indeterminate criminal sentences. He developed a museum depicting the barbarous treatment that was prevalent in asylums for the insane.

Studies pathologies of mental disorders

In 1904, Kraepelin was named director of the new psychiatric clinic in Munich and professor of psychiatry at the university there. Under his direction, the Munich Clinic became a renowned center for teaching and research in psychiatry. The training of his postgraduate students combined clinical observations with laboratory investigations. Kraepelin rejected the psychoanalytical theories that placed innate sexuality or early sexual experiences at the root of mental illness. Likewise, he rejected as unscientific the philosophical speculations that were at the center of much of early twentieth-century psychology. Kraepelin’s research was based on the painstaking collection of clinical data. He was particularly interested in the neuropathology of mental illness, and many important scientists, including Alois Alzheimer, conducted their histological studies of diseased tissues at his clinic.

When Italy declared war on Germany in 1916, Kraepelin’s vacation home on the shores of Lake Maggiore was confiscated, although following the armistice his property was returned. However, during the economic cri-