Johns Hopkins University in 1884, set up one of the first psychology laboratories in the U.S., and established the American Journal of Psychology to promote experimental psychology. In 1889, he became the first president of Clark University, which awarded many of the early American doctorates in psychology. He led a popular child-study and educational reform movement, which he supported through his journal Pedagogical Seminary. He inspired and was the first president of the American Psychological Association. Hall died in 1924.

Hall studied childhood by means of questionnaires (a method he pioneered) on topics such as children’s play, lies, fears, anger, language, and art. He distributed them among teachers, thus amassing huge amounts of data. The backbone of Hall’s thinking was the concept of recapitulation, according to which individual development repeats the history of the species. As supposedly apparent in children’s games, childhood reflected primitive humanity. The following, “juvenile” stage corresponded to an age when humans were well adjusted to their environment and displayed tribal inclinations; it was therefore suited to the formation of groups adapted to the child’s “social instinct.” Adolescence was a “new birth” that brought forth ancestral passions, an age of “storm and stress” characterized by conflicting moods and dispositions, a capacity for religious conversion, and an unlimited creative potential. Hall claimed that it was essential to channel these energies (especially sexual), and that it was “the apical stage of human development” and the starting point “for the super anthropoid that man is to become.” His idealized and lyrical depiction of adolescence synthesized common nineteenth-century ideas about youth into a evolutionary framework and, while conveying nostalgia for a lost closeness to nature, provided an increasingly urban and industrialized society with a confident image of its own future.

Further Reading

Hallucinations
Compelling perceptual experiences which may be visual, tactile, olfactory, or auditory, but which lack a physical stimulus.

Although hallucinations are false perceptions, they carry the force of reality and are a definitive sign of mental illness. Hallucinations may be caused by organic deterioration or functional disorders, and can occur in normal people while asleep or awake, or as a result of sensory deprivation. Generally not positive experiences, hallucinations are often described as frightening and distressing. A person under a hallucinatory state may be either alert and intelligent or incoherent, depending on the type and degree of the disturbance.

One psychological condition commonly characterized by hallucinations is schizophrenia. In schizophrenia, the hallucinations are usually auditory, involving one or more voices. The voices may issue commands, comment on or seem to narrate the person’s actions, or sound like an overheard conversation, and can be analyzed for greater insight into the patient’s emotional state. Auditory hallucinations can also occur in severe depression and mania; seriously depressed persons may hear voices making derogatory remarks about them or threatening them with bodily harm. Visual hallucinations, on the other hand, are more likely to characterize organic neurological disturbances, such as epilepsy, and may occur prior to an epileptic seizure. Hallucinations involving the senses of smell and touch are less frequent than visual or
Hallucinations can also be induced by ingesting drugs that alter the chemistry of the brain. (The technical name used for drug-induced hallucinations is hallucinosis.) The most widely known hallucinogens, or mind-altering drugs, are LSD, psilocybin, peyote, and mescaline, which act on the brain to produce perceptual, sensory, and cognitive experiences that are not occurring in reality. Effects vary from user to user and also individually from one experience to the next. Hallucinations produced by LSD are usually visual in nature. On an LSD “trip,” for example, hallucinations can last eight to ten hours while those produced by mescaline average six to eight hours. Two illegal drugs manufactured to produce psychoactive effects, PCP (phencyclidine) and MDMA (Ecstasy), are not true hallucinogens, but both produce hallucinations of body image as well as psychoses. A person may also experience hallucinations while attempting to withdraw from a drug, such as “pink elephants” or other visual hallucinations from alcohol withdrawal. Withdrawal symptoms from cocaine are associated with the hallucinatory tactile sensation of something crawling under one’s skin, often termed “the cocaine bug.”

Other causes of hallucinations are hypnosis, lack of sleep, stress, illness, and fatigue, which can produce a rare and unique hallucination known as “the dopel-ganger.” A person who has this experience sees his or her mirror image facing him or her three or four feet away, appearing as a transparent projection on a glassy surface. The hypnagogic hallucinations that occur in the zone between sleep and waking are both visual and auditory, and are strikingly detailed to those who can remember them. Sensory deprivation in subjects of laboratory experiments over a period of time has also been shown to produce hallucinations, as has electrical stimulation of the brain. Experiences called pseudohallucinations involve the perception of vivid images without the sense that they are actually located in external space—the perceiver recognizes that they are not real. Associated with isolation and emotional distress, they include such examples as shipwrecked sailors visualizing rescue boats or travelers stranded in the desert visualizing an oasis. Pseudohallucinations do not have the same psychiatric significance as true hallucinations.

People suffering from hallucinations may try to conceal them from others because of their negative connotations, and may receive more drastic forms of treatment or inadequate prognoses because of them. In contrast to mainstream cultural opinion, however, users of hallucinogens in the United States view hallucinations as positive and potentially enlightening, and in other cultures they are regarded for their healing faculties. In the Moche culture of coastal Peru, for example, traditional healers may ingest mescaline as part of a healing ritual in the belief that the hallucinations produced by it offer insight into the patient’s condition and thus aid in the healing process.

Further Reading

Hallucinogens
Substances that cause hallucination—perception of things or feelings that have no foundation in reality—when ingested.

Hallucinogens, or psychedelics, are substances that alter users’ thought processes or moods to the extent that they perceive objects or experience sensations that in fact have no basis in reality. Many natural and some synthetic substances have the ability to bring about hallucinations. In fact, because of the ready market for such chemicals, they are manufactured in illegal chemical laboratories for sale as hallucinogens. LSD (lysergic acid diethylamide) and many so-called designer drugs have no useful clinical function.

Hallucinogens have long been a component in the religious rites of various cultures, both in the New and Old Worlds. Among the oldest are substances from mushroom or cactus that have been in use in Native American rites since before recorded history. Hallucinogenic mushrooms have been used for centuries in rites of medicine men to foresee the future or communicate with the gods. The mushroom is consumed by eating it or by drinking a beverage in which the mushroom has been boiled. The effects are similar to those experienced by an LSD user—enhancement of colors and sounds, introspective interludes, perception of nonexistent or absent objects or persons, and sometimes terrifying, ominous visions.

Another ancient, natural hallucinogenic substance is derived from the Mexican peyote cactus. The flowering head of the cactus contains a potent alkaloid called mescaline. Hallucinogenic substances can be found in a number of other plant species.

In the 1960s, hallucinogens were discovered and embraced by the hippie movement, which incorporated drugs into its culture. In addition, artists, poets, and writ-