episode with what they regard as an open mind, but their subjectivity colors their perceptions. The alternate approach is "bottom-up" processing that relies less on what is already known or expected and more on the nature of the external stimulus. If there are no preconceived notions of what to expect, cues present in the stimulus are used to a greater extent. One part of this process is called feature analysis, which involves taking the elementary cues in a situation and attempting to put them together to create a meaningful stimulus. When children listen to an initially unfamiliar set of sounds, like the “Pledge of Allegiance,” they often hear words and phrases that adults (who use top-down processing) do not hear. Thus, the phrase “one nation indivisible,” may be heard by a child as “one naked individual.” The child has heard the correct number of syllables, some key sounds, and the rhythm of the phrase, but too many features are unclear, resulting in an inaccurate perception. In general, many psychologists have concluded that perceptual abilities rely both on external stimuli and on expectation and knowledge.

Much of the research in perception has involved vision for two general reasons. First, psychologists recognize that these this sense dominates much of human perception and, second, it is easier to study than audition (hearing) or the minor senses like taste, smell, touch, and balance. Other perceptual research has investigated the way people pay attention to the world around them and learn to ignore information that is irrelevant to their needs at any given moment.

Within the realm of vision, several areas have especially captured the attention of psychologists: depth perception, form perception, perceptual constancy, and perceptual organization. When a visual scene contains information that includes conflicting information about depth, form, and organization, the result is a visual illusion, commonly referred to as an optical illusion. Such illusions can occur when there is too little information available to generate an accurate interpretation of the stimulus; when experience leads to the formulation of a specific interpretation; or when the sensory systems process information in a consistent, but inaccurate, fashion. Illusions are completely normal, unlike delusions that may reflect abnormal psychological processes.

Another aspect of perception that psychologists have studied intensively is attention. Often, people can selectively attend to different aspects of their world and tune others out. In a loud, crowded room, for example, a person can understand a single speaker by turning his or her attention to the location of the speaker and concentrating on the frequency (pitch) of the speaker’s voice; the individual can also use the meaning of the conversation to help in concentration and to ignore irrelevant speech. In some cases, however, we seem incapable of ignoring information. One common example is the "cocktail party phenomenon." If something is holding our attention but an individual within earshot speaks our name, our attention is quickly diverted to that individual. When we perceive a stimulus that is important to us (like our name), our attention switches. One famous example that involves an inability to ignore information is the Stroop effect. If words are printed in colored ink, it is normally an easy task to name the color of the ink. If the words are color names, however, (e.g., “RED”) that appear in a different ink color (e.g., the word “RED” in green ink), we have difficulty naming the ink color because we tend to read the word instead of paying attention to the ink color. This process seems entirely automatic in proficient readers.

Research on the perceptual capabilities of young children is more difficult because of insufficient communication skills. At birth, infants can see objects clearly only when those objects are about eight inches (20 cm) from the eye, but distance vision improves within the first month. Infants also exhibit depth perception and appear to have some color vision. Similarly, infants can detect speech sounds shortly after birth and can locate the origin of sounds in the environment, as is smell and taste. Within a few days following birth, breast-fed babies can differentiate their own mother’s milk from that of another mother, and also prefer odors that adults like and respond more negatively to the types of odors adults do not like.

Further Reading

**Perfectionism**

The tendency to set unrealistically high standards for performance of oneself and others, along with the inability to accept mistakes or imperfections in matters of personal appearance, care of the home, or work; may be accompanied by an obsession with completeness, purity, or goodness.

Perfectionism is a psychological orientation which, depending on the severity, may have biological and/or environmental causes. To an educated observer, a perfectionist orientation is usually evident by the preschool years, though it may not cause problems until the college years. The perfectionist orientation has two components: impossibly high standards, and the behaviors intended to
help achieve the standards and avoid mistakes. The high standards interfere with performance, and perfectionist behavior becomes an obstacle instead of a means to achieving the goal. For example, when a five-year-old who is learning to write repeatedly erases his lines because they are not exactly straight, he is exhibiting a perfectionistic tendency.

Due to obsessive effort and high standards of performance combined with natural gifts, perfectionists may be athletic, musical, academic, or social achievers, but they may equally as often be underachievers. Perfectionists engage in dichotomous thinking, believing that there is only one right outcome and one way to achieve that outcome. Dichotomous thinking causes indecisiveness, since according to the individual’s perception a decision, once made, will be either entirely right or entirely wrong. Due to their exacting precision, they take an excessive amount of time to perform tasks. Even small tasks become overwhelming, which leads to frustration, procrastination, and further anxiety caused by time constraints.

Perfectionists also pay selective attention to their own achievements, criticizing themselves for mistakes or failures, and downplaying their successes. Overwhelmed by anxiety about their future performance, they are unable to enjoy successes.

Perfectionist anxiety can cause headaches, digestive problems, muscle tension, and heart and vascular problems. Anxiety can also cause “blanking” or temporary memory losses before events such as musical performances or academic exams. Perfectionists also hesitate to try new activities for fear of being a beginner at an activity, even for a short period of time. Negative effects of perfectionism are felt especially when an individual is a perfectionist in all areas of life, rather than in one realm, such as an artistic or scientific pursuit, which might allow room for mistakes in other areas of life.

In extreme forms perfectionism may contribute to depression or be diagnosed as obsessive-compulsive personality disorder (which should be distinguished from the more serious obsessive-compulsive disorder). The more common syndromes of anorexia nervosa and bulimia can be considered an extreme form of perfectionism directed towards the body and its appearance. The irrational distortions of perception that can arise from abnormally high standards of “performance” (i.e., thinness) are evident in the anorexic’s perception of her or himself as fat.

Perfectionist behavior functions essentially to control events. Conditions that place the person in a position of vulnerability and/or that require the person to take extra responsibility for events can contribute to perfectionism. First-born children, children with excessively critical parents, and children who have lost a parent or sibling all may be predisposed towards perfectionism.

Further Reading

Frederick S. Perls
1893-1970
German-American psychotherapist who co-founded Gestalt therapy.

Frederick S. Perls, known to his friends and colleagues as Fritz, was the co-founder with his wife Laura (1905-1990) of the Gestalt school of psychotherapy. Trained as a Freudian, Perls felt that Freud’s ideas had limitations, in part because they focused on past experiences. One of the key elements of Gestalt therapy is its focus on what Perls called the “here and now.” During the 1960s, Gestalt therapy gained a reputation as yet another of the “feel-good” therapeutic techniques then so common. Today, Gestalt is recognized as one of several standard approaches (often part of what is called an “eclectic” approach) to modern therapy.

Perls was born in Berlin in 1893 into a middle class family. He was a bright student, but his interest in science did not emerge until after he enrolled in college in 1913. Before that he had been interested in the theater. He toyed briefly with the idea of studying law but settled on medicine.

The First World War interrupted his college years. He served until the war ended in 1918, then continued his medical studies. He received his M.D. in 1921 By this time he had decided that he wanted to focus on psychiatry. Perls was an admirer and follower of Sigmund Freud and his psychoanalytic techniques. At the same time, he was becoming more and more intrigued by Gestalt psychology.

The English language has no equivalent word for “Gestalt,” but it is commonly translated as “pattern” or “form.” Gestalt psychology states, in simplest terms, that the whole is greater than the sum of its parts. In other words, in order to understand the various components of a particular issue or event, one must understand the event itself and put the components in perspective. In the