move obstacles to optimal development. A focus on adult development is helpful to many types of clients, such as women returning to the work force, or individuals undertaking second careers. Counseling psychology, paralleling a growing trend among health care providers, also advocates preventive as well remedial approaches to problems, seeking to identify “at risk” individuals and groups and intervene before a crisis occurs.

Of the psychotherapeutic models available to counseling psychology at its inception in the 1940s, Rogerian, or client-centered therapy has had the most influence. Carl Rogers, whose methods were more readily understood and adapted by counselors than those of Sigmund Freud, had a lasting influence on the techniques of vocational counseling and counseling psychology, which focus more on the process than on the outcome of the counseling relationship. Two other theoretical models that have been especially influential are decision-making theory and the social influence model. The former attempts to teach clients procedures and strategies for effective decision making, including such techniques as weighing the factors in a decision according to a numerical point system. Decision-making is related to counseling psychology’s overall emphasis on problem solving.

Social influence theory, currently one of the prevailing theories in the field, involves the counselor's influence over the client based on how the client perceives him or her in terms of such factors as credibility and degree of expertise. Researchers have studied the behaviors that contribute to the counselor's social influence; the ways in which social influence can be maximized; and social influence in relation to such factors as race, gender, age, and social class. Over the years, the fields of counseling psychology and psychotherapy have begun to overlap as clinical psychologists have concentrated more on relatively healthy clients and counselors have grown to rely more heavily on psychotherapeutic techniques. There has also been a growing overlap between counseling and social work, as social workers have moved in the direction of therapeutic counseling themselves. Thus, there has been an overlap between these professions.

Most counselor training programs are offered by colleges of education rather than psychology departments. As the establishment of credentials has become more and more important (particularly with regard to payments by insurance companies), counseling psychology programs are offering (and requiring) an increased amount of training in basic psychology, which can include rigorous internship programs. Counseling psychology has its own division, Division 17, of the American Psychological Association, and its own professional publications, including The Counseling Psychologist, a quarterly, and the Journal of Counseling Psychology, which appears bimonthly.

Further Reading

Counterconditioning

An aspect of behavior therapy that involves weakening or eliminating an undesired response by introducing and strengthening a second response that is incompatible with it.

The type of counterconditioning most widely used for therapeutic purposes is systematic desensitization, which is employed to reduce or eliminate fear of a particular object, situation, or activity. An early example of systematic desensitization was an experiment that is also the first recorded use of behavior therapy with a child. In a paper published in 1924, Mary Cover Jones, a student of the pioneering American behaviorist John Watson, described her treatment of a three-year-old with a fear of rabbits. Jones countered the child’s negative response to rabbits with a positive one by exposing him to a caged rabbit while he sat some distance away, eating one of his favorite foods. The boy slowly became more comfortable with the rabbit as the cage was gradually moved closer, until he was finally able to pet it and play with it without experiencing any fear.

In the 1950s South African psychiatrist Joseph Wolpe (1915- ) pioneered a prototype for systematic desensitization as it is generally practiced today. Like Cover’s experiment, Wolpe’s technique involved gradually increasing the intensity of exposure to a feared experience. However, instead of countering the fear with a pleasurable stimulus such as food, Wolpe countered it with deliberately induced feelings of relaxation. He had the client imagine a variety of frightening experiences and then rank them in order of intensity. The client was then trained in deep muscle relaxation and instructed to practice it as he pictured the experiences he had described, progressing gradually from the least to the most frightening. Today systemic desensitization of the type pioneered by Wolpe is widely used with both adults and children. In adults its uses range from combating phobias, such as a fear of snakes or flying, to increasing tolerance of pain.
from chronic illnesses or natural childbirth. In children, it is used to overcome a wide variety of fears, such as fear of certain animals or fear of the dark.

Another type of counterconditioning is **aversive conditioning**, which makes a particular behavior less appealing by pairing it with an unpleasant stimulus. Aversive conditioning has been used in adults to break addictions to substances such as tobacco and alcohol. Alcoholics are sometimes given an alcoholic drink together with a drug that induces nausea to weaken the positive feelings they associate with drinking.

### Covert sensitization

An aversion therapy that reduces unwanted behaviors by repeated, imagined associations with an unpleasant consequence.

Covert sensitization was first described in the mid-1960s by psychologist Joseph Cautela as a new treatment for people who engage in undesirable behaviors. In the past 30 years it has been researched as a treatment for alcoholism, smoking, obesity, and various sexual deviations including pedophilia and exhibitionism.

Covert sensitization discourages people from engaging in unwanted behaviors by creating an association between those behaviors and an unpleasant consequence. Because of this, it is classified as a type of aversion therapy. What is unique about covert sensitization, however, is that the unwanted consequence is never actually present in therapy. This is best illustrated with an example. If a person was undergoing covert sensitization to stop using alcohol, for instance, a typical therapy session would involve the therapist instructing the client to imagine himself drinking and becoming very nauseous. Then the client would be encouraged to imagine himself becoming so nauseous that he starts vomiting all over himself, the room he is in, and in the beer mug from which he was drinking. By imagining this disgusting scene over and over again, the client starts associating alcohol with vomit, and drinking becomes much less appealing. Finally, the therapist would instruct the client to imagine accepting a drink, becoming nauseous again, and then deciding to refuse the drink. In the imagined scene, the nausea (which is an unpleasant stimulus for almost everyone) goes away as a consequence of the client’s choice not to drink.

The major advantage covert sensitization has over other methods of aversion therapy is that it works without the presence of the unwanted behavior and the unpleasant consequence. This has practical and ethical advantages. For example, when treating exhibitionists, it would be difficult to justify encouraging people to expose themselves to others while a therapist administered a shock or some other unpleasant stimulus. It is important to note that aversion therapy is not the only way to break bad habits. Large-scale studies comparing several methods have found that other techniques, such as behavioral family counseling and self-management techniques, are also effective.

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### Further Reading


### Creativity

The ability to juxtapose ideas in a new and unusual way to find solutions to problems, create new inventions, or produce works of art.

Any human endeavor can involve creativity and is not limited to just the arts. Numerous theories of creativity were proposed by 20th-century psychologists, educators, and other social scientists. Howard Gruber, who worked to understand creativity by studying the lives of famous innovators, found broad common characteristics: 1) they engaged in a variety of activities within their chosen fields; 2) they held a strong sense of purpose about their work; 3) they had a profound emotional attachment to their work; and 4) they tended to conceptualize problems in terms of all encompassing images. Graham Wallas’s 1962 study of well-known scientists and other innovators yielded a widely used four-stage breakdown of the creative process. The preparation stage consists of formulating a problem, studying previous work on it, and thinking intensely about it. In the incubation stage, there is no visible progress on the problem; it may be periodically “mulled over,” but it is largely left dormant, allowing subconscious ideas about it to emerge. At the illumination stage, an important insight about the problem is reached, often in a sudden, intuitive fashion. In the final, or verification, stage, the idea is tested and evaluated.

Creativity differs from the kinds of abilities measured by standard intelligence tests. Creative people tend to