

ENCYCLOPEDIA OF PSYCHOLOGY

Volume 1

5C

RAYMOND J. CORSINI, Editor

BONNIE D. OZAKI, Assistant Editor

CONSULTING EDITORS

George W. Albee
Anne Anastasi
Albert Bandura
Theodore Blau
Nicholas Cummings
Florence Denmark
J. P. Guilford
E. R. Hilgard
J. McV. Hunt
E. Lowell Kelly
W. J. McKeachie
Neal E. Miller
O. H. Mowrer
Max Siegel
M. Brewster Smith
Leona Tyler

ASSOCIATE EDITORS

Edgar F. Borgatta
Josef Brozek
Albert Ellis
Charles Golden
Elaine Hatfield
Thelma Hunt
Anthony Marsella
Dan Motet
Robert Perloff
Victor Raimy
Lee Sechrest
Norman Sundberg
William Verplanck
Michael Wertheimer

FOREIGN EDITORS

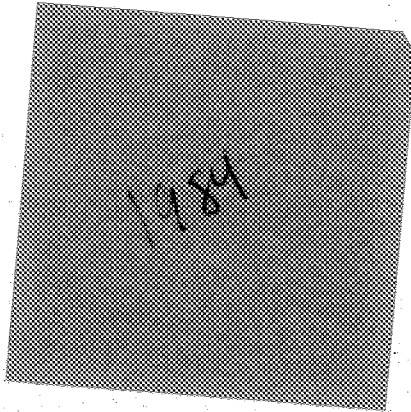
Ruben Ardila
Ramón Bayés
Donald Broadbent
Chi-Cheng Ching
R. Diaz-Guerrero
H. C. J. Duijker
M. O. A. Durojaiye
Gery d'Ydewalle
Giselher Guttman
Alex Kozulin
G. A. Lienert
Richard Meili
Henryk Misiak
Vid Pecjak
Luigi Pizzamiglio
M. K. Raina
Amiram Raviv
Maurice Reuchlin
Roger W. Russell
A. M. Sullivan
Yasumasa Tanaka

Biography Editors: WILLIAM S. SAHAKIAN and ROBERT W. LUNDIN

A Wiley-Interscience Publication

JOHN WILEY & SONS

New York • Chichester • Brisbane • Toronto • Singapore



SELF-CONTROL

Psychology has had a long and stormy relationship with concepts relating to issues of human agency. Willpower, will, and self-control have all been part of the battle. Psychology cannot seem to dismiss the concepts summarily and finally; and the terms do not lend themselves to easy conceptual and/or empirical resolution. As the Russian neuropsychologist A. R. Luria noted: "The study of the mechanisms through which the human is able to control his behavior brings us directly to the problem of *will*. One may state without fear of contradiction that no other psychological question has a history so fraught with errors; the actual history of the study of will is a history of mistakes, and the inventory of the contemporary psychological conceptions concerning will is a cemetery of fallacies, of loosely put questions and trivial investigations" (Luria, 1960, p. 397).

The approach/avoidance view of self-control is almost like a roller coaster—sometimes self-control is riding on top and is in favor. For example, late nineteenth century psychology had chapters on will and self-control. These chapters grew out of an image of the person as a prime initiator of action. At other times, however, self-control has been relegated to the back corridors of philosophical chambers. Psychologists in the United States after G. Stanley Hall (and German psychologists after Ach and Lewin) discussed these notions in terms of drive and motive, voluntary and involuntary muscles. Over the past two decades, interest in self-control has again increased substantially.

INTEREST IN SELF-CONTROL, AND SOME PROBLEMS

The theme of action with self-discipline and self-control arises in widely varying cultures and religious traditions, including the Hellenistic Greek's view of self-control as that of an autonomous individual living in harmony with the community (Hadas, 1965); the Muslim's ethical self-restraint (Lapidus, 1976); Confucianism's self-sufficiency and internal self-regulation (Tseng, 1973); and Christianity's control and elimination of carnal desires (Bouwisma, 1976). In the ancient Hindu text, the *Bhagavad Gita*, it is stated that for persons of wisdom there is not a hair's breadth distance between will (what they want to do) and action (what they do).

These views leave unanswered a myriad of questions—some philosophical, some theoretical, some practical, and some value laden. For example, what are the areas in which individuals can gain control? Is there an optimum level of control? Can we ever have too much self-control? Are there different types of self-control? Who is the "self" in self-control—is self

an object of control, or the controller, or both? How does self-control relate to philosophical assumptions of free will and determinism, or of nature and nurture? How do people develop discipline? Do they learn it, or are they born with it? What are the roles of conscious choice, effort, and individual responsibility in self-control? Is self-control a relevant concept for everyone? Is it a useful one? Do all people need to feel in control, or do some try to escape from control and freedom, as E. Fromm (1941) suggests.

When psychologists saw so many different philosophical and value-laden questions, there was a realization that to preserve and bolster psychology's status as a scientific discipline, as well as to avoid potentially mentalistic and teleological concepts of will, it was easier to ignore self-control altogether and proceed from a deterministic viewpoint. And yet, if psychology is to reflect the human within the universe, how can one reconcile issues of free will in a legal, social, and religious sense with determinism in a psychological sense? Thus one reason why self-control will not just go away is the ubiquitousness and relevance of the term philosophically, societally, legally, and from a religious standpoint.

A second reason for the current interest in self-control comes from the reports in the mid-1960s from India and the Orient detailing extraordinary feats of bodily control and altered states of consciousness by meditation masters (Wenger & Bagchi, 1961; Rao, 1958; Kasamatsu et al., 1957; Anand et al., 1961; Shapiro, 1980). These reports were not summarily dismissed because they parallel a rather major shift in Western scientific Zeitgeist and models. For example, Neal Miller (1969) of Rockefeller University, among others, was showing that voluntary control of the autonomic nervous system was possible. Further, increased sophistication and scientific instrumentation gave rise to the possibility of replicating and substantiating anecdotal reports by measuring physiological, behavioral, and cognitive changes in self-directed activity. These findings cause a reconsideration of the formulations of classical neurology that taught that the autonomic nervous system was beyond voluntary control.

A third reason for the increased interest was the growing dissatisfaction among health care professionals who found themselves treating stress-related disorders exclusively with pharmacological solutions. This resulted in attempts to find non-drug-related self-regulation strategies by which individuals might learn better to manage their own internal and external behaviors (Coates & Thoresen, 1978; Bakal, 1979).

Within this context, one of the more promising areas in psychotherapy and the health sciences has been efforts toward the development and refinement of Eastern and Western self-control strategies for the amelioration of clinical problems.

There has been a plethora of research studies showing the clinical effectiveness of these strategies with a variety of affective and physical disorders, including obesity (Stunkard, 1979); stress (Stoyva, 1979; Shapiro & Shapiro, 1980); hypertension (Agras & Jacob, 1979; Benson et al., 1974); pain (Fordyce & Steger, 1979); depression (Mathews, 1977); and insomnia (Thoresen et al., 1981). Broadly subsumed under the label of self-control strategies, these techniques include, but are not limited to, behavioral self-control (Mahoney & Thoresen, 1974; Mahoney & Arnkoff, 1979; Shapiro & Zifferblatt, 1976); cognitive behavior modification (Meichenbaum, 1977) and cognitive therapies (Beck, 1976); meditation (Shapiro & Giber, 1978; Shapiro, 1980); biofeedback (Schwartz, 1973; Blanchard & Young, 1974); self-hypnosis (Fromm, 1975; Katz & Crawford, 1978); progressive relaxation (Jacobsen, 1971); and guided daydreams and imagery (Singer, 1974).

A fourth reason for the current interest in self-control relates to the personal, social, and theoretical importance of control. Relevant research includes the work of J. V. Brady (1958) with "executive" monkeys who experience the negative effects of responsibility and too much "control"; J. M. Weiss' (Weiss et al., 1976) work on "yoked" male rats who did not have any control; D. C. Glass (1980) and his colleagues' work on the importance of perceived control and changing behavior; M. E. P. Seligman's (1969) work on learned helplessness and the relationship of perceived

lack of control to depression; H. Lefcourt's (1980) work on the importance of the illusion of control; the pioneering work of Mike Friedman (1974) and David Glass (1977) on the relationship of control to physical health, particularly the coronary prone A-type personality. Recent biochemical research suggests the following: A-type individuals showed elevated noradrenalin reactions to stressful stimulation whereas B-type individuals failed to show this responsiveness (Friedman et al., 1975); work by Weiss and associates (1976) suggests that severe depletion of brain norepinephrine in rats is often associated with helplessness and the giving-up processes. This work, plus the role of endorphins in pain and stress management, suggest potential biochemical mechanisms accounting for control, as well as the relationship between stress and the psychoimmunological system.

Control is mentioned in the *Diagnostic and statistical manual* (DSM-III, 1980) under various guises, generally with absence of control or lack of voluntary ability being considered qualities of the impulse disorders, implicated in the depressive and anxiety disorders. (See also Judy Garber and co-workers (1980) for further discussion of control, anxiety, and depression.) Other related concepts in contemporary psychology include the social learning theorist's self-efficacy (Bandura, 1977); delay of gratification (Michel, 1970); the existentialist's concept of will (May, 1969); Julian Rotter's (1966) internal/external locus of control; and the neoanalytic concept of competence suggested by Robert White (1959). Further, there are efforts to bring control theory (Carver & Scheier, 1981) from mathematics, systems (Weiner, 1948) and cybernetic theory (von Bertalanffy, 1968) to discussions of self-regulation.

SELF-CONTROL STRATEGIES

A self-control strategy refers to a family of techniques an individual consciously practices in a regular, systematic manner to influence cognitive activity and/or behavioral activity in a desired direction. B. F. Skinner's view is that self-control is a behavioral sequence in which an organism manipulates environmental influences in accordance with learning principles to alter a specific behavior (Skinner, 1953). Thoresen and Mahoney note that, "A person displays self-control when, in the relative absence of immediate external constraints, he engages in behavior whose previous probability has been less than that of alternatively available behaviors (involving lesser or delayed reward, greater exertion or aversive properties, and so on). This response pattern is often influenced by delayed environmental consequences. . . . The designation of a behavior pattern as self-regulatory is a socially relative labelling process" (Thoresen & Mahoney, 1974, p. 12).

Michael Mahoney and D. Arnkoff define self-control as a social label differentially applied to some behavior patterns (1979). Several characteristics are noted: A behavior pattern is not considered self-regulatory if it is apparent to the labeler that the behavior is receiving prompt reward or punishment; people do not receive credit for self-control if it is something they seem to have been doing effortlessly all their lives.

Following are several self-control strategies.

The Relaxation Response

H. Benson has referred to the general pattern of physiological changes that occur during the practice of stress-management strategies as a hypometabolic state, or "relaxation response" (Benson et al., 1974). This response is considered to be the opposite of the fight or flight response and involves a lowering of blood pressure, a reduced heart rate, a decrease in oxygen consumption, and so on. The relaxation response is considered to be incompatible with physiological changes that accompany a stress reaction; thus inducing the relaxation response counteracts the effects of stress.

Meditation

Meditation refers to a constellation of techniques that involve a conscious effort to focus attention in a nonanalytical manner (Shapiro, 1980). Two general types of meditation have been identified (Shapiro, 1978). The understanding of these two types can be facilitated by recourse to brain neurophysiology (Pribram, 1971). The brain either can focus as a wide-angle lens

does or as a zoom lens does. One type of meditation, concentrative meditation, refers to focusing, as does a zoom lens, on one particular object (word, phrase, picture, sound) to the exclusion of all other stimuli in the external and internal environment. The second type, opening-up meditation, refers to focusing as a wide-angle lens does on all sensations, feelings, and inputs that are occurring simultaneously outside and inside the meditator. The object of both meditative practices is "simply to observe." Individuals are instructed not to become caught up in dialog with their own thoughts, images, and so on, but merely to watch them and eventually let them "flow down the river" (Shapiro, 1980). In general, clinical research suggests that meditation is a promising strategy for stress and tension management, for hypertension, and even for decreasing addictive behaviors (Shapiro & Giber, 1978; Shapiro, 1980). Its effectiveness appears to be due primarily to the reduction of internal cognitive chatter, and a constellation of physiological changes that occur in practitioners. Initial effects seem clear within the first four to 10 weeks of practice (J. Smith, 1975).

Biofeedback

Biofeedback encompasses a group of techniques that use electronic monitoring instruments to augment the body's own internal signals, magnify them, and then provide either audio or visual feedback to the patient (Brown, 1978). The goals of biofeedback training are (1) to increase awareness of relevant physiological functions, (2) to develop control over these functions, and (3) to generalize this control from the laboratory to the real world (Holroyd, 1979).

Types of biofeedback instrumentation include electroencephalograms, electromyograms, galvanic skin responses, and temperature training. The electromyogram and temperature training are used most commonly as they are the easiest to learn and provide the quickest positive response for the patient. In the training, the individual is instructed to try to make the tone frequency increase by whatever means work best. In temperature training, for example, each time the individual causes his/her temperature to rise, a tone sounds.

Biofeedback appears to be a promising intervention strategy, although research suggests it may be more effective with cyclic disorders, such as headache, than with problems that persist, such as hypertension (Holroyd, 1979). Clinical issues under consideration (Schwartz, 1973; Budzynski, 1976) in biofeedback circles include the fact that relaxation of one muscle group does not necessarily generalize to other muscle groups. Therefore, biofeedback provides more specific direct relaxation of particular problem areas than does meditation, but less overall relaxation. Another issue being examined is related to which type of biofeedback is better for which types of clinical problems. For example, it has now been established that for certain types of headache (e.g., migraine), temperature biofeedback is effective (Budzynski et al., 1973). Also of concern is whether physiological control established in a laboratory setting with biofeedback equipment can be generalized effectively to the natural environment in which the stress occurs but where no equipment is available (Holroyd, 1979; Schwartz, 1973).

Autogenic Training

This technique, developed by Schutz and Luthe (Luthe, 1963), involves different statements that an individual can make internally, such as, "My hands are feeling warmer." "My legs are feeling warmer." "My heart is slowing down." "My breath is becoming calmer." These statements are designed to develop specific types of relaxation sensations in various parts of the body. Often autogenic training is used in conjunction with biofeedback as one specific set of cognitive strategies a person can use to facilitate accomplishment of the desired physiological changes.

Progressive Relaxation

This technique, developed by E. Jacobson (1971), involves having the individual differentially tense and relax large and small muscle groups, progressing systematically from one end of the body to the other. A tape or direct

instruction by the therapist facilitates this exercise. The patient is instructed to proceed through the tensing and relaxing of various muscle groups until the entire body is in a state of deep muscle relaxation. At the same time, cues are given to the individual to pay attention to the contrast between tension and relaxation, to identify the warmth and heaviness of the relaxation experience, and so forth. This technique is sometimes combined with positive imagery and visualization techniques further to enhance the experience of relaxation.

Systematic Desensitization

An additional technique often used in conjunction with deep muscle relaxation is systematic desensitization (Wolpe, 1958). This technique may be used to address the patient's unhealthful, panicked, or anxious response to stress. The individual is instructed to make a hierarchy of anxiety-producing or stress-inducing events, and then is taught systematically to combine the visualization of these events with a state of deep muscle relaxation. The therapist works with the individual so that the patient eventually can learn to go through the hierarchy independently, being able to maintain a state of relaxation and calm in the face of presentation of the stress-producing, noxious image. Theoretically it is assumed that relaxation is incompatible with tension and therefore counterconditions to it.

Hypnosis

Hypnosis periodically experiences renewed popularity in medical settings (Frankel, 1978), although researchers and practitioners still disagree on an all-encompassing definition of hypnosis. Some maintain (Frankel, 1978) that hypnosis produces an altered-state, trance experience in the subjects. However, others, of whom T. X. Barber is the primary proponent (Barber et al., 1974), assert that most of the achievements accomplished while under hypnosis are within the range of normal human capabilities, thus positing that the existence of a hypnotic trance is unnecessary. In any event, hypnotic techniques involve, to a greater or lesser degree, suggestibility, deep relaxation, placebo effect, and intense transference (Shor, 1962). Hypnotic induction may include cognitive statements, attentional focus (e.g., on the palm of the hand), and sometimes imagery (Zimbardo et al., 1972). Hypnosis may be induced by a therapist or self-induced. A distinction is also made between direct and indirect hypnosis. Milton Erickson is the authority on the latter process (Erickson et al., 1976), in which the therapist gives certain cues and verbal and nonverbal innuendos to induce a state of hypnosis in the patient, without ever setting up an explicit contract with the patient for hypnosis to occur. The ability to experience hypnotic suggestion depends on the person's hypnotic responsiveness, which some believe to be a relatively stable attribute (Frankel, 1978). Others suggest that hypnotic susceptibility can be learned (Tart, 1975). In terms of stress reduction, hypnosis is useful in producing feelings of calm and tranquility.

Behavioral Self-management

Behavioral self-management strategies are derived conceptually from social learning theory (Bandura, 1977). The initial self-management strategy is behavioral self-observation (Mahoney, 1974), a technique designed to teach the patient to monitor in a precise way behavior in relationship to the environment. For example, in the case of stress, behavioral self-observation can be used to help the patient become aware of his/her person-specific response to stress: *physiological cues*—for example, butterflies in the stomach, tension in the neck, sweaty palms; *cognitive statements*—for example, "I feel out of control, helpless"; and *images*—for example, a visualization of falling or disintegration. The individual is then instructed to observe the antecedents to stress (i.e., which persons, events, places, thoughts, feelings seem to trigger stress responses) and the consequences—how the patient normally copes with stress (e.g., eating, drinking, avoiding, depression, etc.).

At this point, the individual may be instructed to practice a variety of coping (Meichenbaum, 1976) or mastery (Wolpe, 1958) strategies tailored specifically to that individual, and focusing on a more beneficial rearrange-

ment of cues and consequences. These techniques include environmental planning (rearranging the environment) and behavioral programming (appropriate contingent use of reinforcement and punishment) (Thoresen & Mahoney, 1974).

In coping strategies, the individual learns to make the stressful input a cue for relaxation, rather than for anxiety. Then the individual practices a stress inoculation training (Meichenbaum, 1977), which emphasizes modification of internal dialog through a sequence of graduated practice. Here the goal is to modify stress-related reactions by training the patient to talk differently to himself or herself about the stressful problem. Stress inoculation training substitutes analysis and relabeling for the panic reaction, and emphasizes the importance of successive approximation and rehearsal, as well as self-instructions and relaxation imagery.

RESEARCH-COMPARING STRATEGIES

Preliminary research (Shapiro, 1982) indicates the following differentiations among strategies that need to be taken into consideration:

1. For detecting a precise functional relationship between the patient's environment and stress, behavioral self-observation is the treatment of choice (Thoresen & Mahoney, 1974).
2. For tension headache, electromyography biofeedback is the treatment of choice; for migraine headache, it is temperature training (Glueck & Stroebel, 1975; Budzynski et al., 1976).
3. Between meditation and biofeedback, for "general relaxation," meditation is the treatment of choice; for a specific stress area, biofeedback is preferable (Schwartz, 1973).
4. For cognitive stress, a cognitive strategy such as hypnosis or meditation appears more effective than a somatic strategy (Schwartz et al., 1978).
5. For somatic stress, exercise or progressive relaxation appears to be more effective (Schwartz et al., 1978).
6. For a person with a primarily auditory response system:
 - (a) When using biofeedback, a visual feedback stimulus is preferable (Branstrom, 1979).
 - (b) When using meditation or hypnosis, an auditory stimulus is preferred (Davidson & Schwartz, 1976).

One of the reasons why the self-control strategies may be equally effective, names and labels aside, is that almost all of the techniques involve attentional focusing, cognitive statements, and/or imagery. Further, a general antistress response in the individual has been posited (Stoyva & Budzynski, 1975), which identifies a common pathway shared by all the self-control techniques that promotes a pattern of psychobiological responding antithetical to the stresses of daily living.

Free Will Versus Determinism

The issue of free will versus determinism cuts right to the issue of self-control and is a critical underpinning and assumption.

Self-control as a construct implies a process movement away from reflexive action to conscious choice and awareness. The belief system (postulate, assumption) upon which the construct is based is that individuals are not absolutely determined, can gain more autonomy and free choice, and do have the ability to effect change in their lives on some level. Even those schools that argue that free will or free choice is a misnomer, if they wish to utilize the concept of self-control, have to agree that an illusion of freedom is important to individuals. Thus the concept of self-control is not possible without recourse to a view of individual choice and freedom, even if only an "as if" view (J. Smith, 1982). Further, this assumption of free choice, which is an existential given, may be increased as the individual learns additional skills of awareness, decision making, and so on.

In psychoanalytic theory, Freud's relatively passive ego on the id horse of passions became refined in a way to give more "control" to the individual. For example, E. Hartmann talks about the autonomous ego developing in a deterministic fashion, but then becoming relatively independent of,

and able to regulate, the instincts from which it has arisen (Klausner, 1965).

Another example comes from an Eastern perspective, as evidenced in the Chinese language. Two characters make up the Chinese word for "fate" (i.e., how one is controlled). One of these characters is heredity; the other is environment. The Chinese believe that individuals are determined (controlled) by their fate. However, the word "to learn" in the Chinese language consists of two characters, one the nose (meaning self in the East) and one wings above the nose. To learn is to have the self soar. Thus, rather than control being forever externally imposed by the environment and heredity, the individual can learn to exercise a "self" control. The Chinese language exemplifies a belief in the individual's *learning* to "rise above" or "transcend" fate by developing certain self-control skills (Shapiro, 1978).

Responsibility

Responsibility is also a critical underpinning of self-control, a movement away from blaming others and the environment, away from an external locus of control, to an internal locus of control and assuming self-responsibility (Globus, 1980; Knowles, 1977; Rotter, 1966; Shapiro & Shapiro, 1979).

Both Sigmund Freud and Carl Jung believed that, in the last analysis, it was up to the patient to change. Although the therapist could be facilitative, could lead the horse to water—in fact, the Freudian analyst trying to overcome resistance can even push the horse's mouth down toward the water—it is the horse's choice whether to drink. In a sense, the issue becomes one of self-control: The choice is the individual's. As Jung (1973) noted: "Any of my pupils could give you so much insight and understanding that you could treat yourself if you don't succumb to the prejudice that you receive healing through others. In the last resort every individual alone has to win his battle, nobody else can do it for him."

THE ROLE OF SELF

One of the most difficult and confusing philosophical issues regarding self-control is the question of who or what controls the mind, and who or what is being controlled. Are there various layers of "self"? Does the ego control the mind? Or is some *part* of the mind in control, as in the "executive" control of a computer? Does self-control imply control of the self (self as object) or is it a self-exercising control? What is the relationship between this self, if such an entity is posited to exist, and the mind? Does the self control the mind, or the mind control the self?

There are many different and competing views with regard to this self, and at this point all they can provide are metaphors, analogies, or viewpoints, as there is as yet no definitive evidence suggesting any one right answer. Therefore, it is critical that one be quite precise in stating the particular viewpoint in discussing the concept of self.

Some views suggest that the concept of self is not needed in understanding human behavior (Skinner, 1953); others, that self needs to be seen as an interaction between the person and environment, whether field theory (Gordon & Gergen, 1968), social interaction theory (Mead, 1925), reciprocal determinism (Bandura, 1978), or systems model (Minuchin et al., 1978). Some suggest that the vision of personal autonomy and self-control is located in this "self," whether it is called the centered self as in the existentialist (May, 1969) view or the individuated self in Jungian terminology (Jung, 1960).

Some traditions stress the importance of controlling the "self," developing and enhancing this self so that there is an ability to overcome identity diffusion and low self-esteem (Erikson, 1950). Several traditions discuss the importance of increasing the sense of congruence between self-concept (Rogers, 1951; Lecky, 1945) and actual behavior, and increasing a positive sense of oneself (i.e., high self-esteem) (Hannum, et al., 1974).

Still other approaches center on the need to lose self-importance (Globus & Globus, 1982), to transcend self-other dichotomies (Goleman, 1982; Walsh, 1982, Rajneesh, 1982), and to keep the self from becoming exclu-

sively identified (i.e., being able to disidentify) (Assagioli, 1971). Also, see Viney (1969) for a review of different concepts of the self.

A-TYPE PERSONALITY
B-TYPE PERSONALITY
AUTOGENIC TRAINING
BIOFEEDBACK
COPING
IMAGERY
INDEPENDENT PERSONALITIES
INTERNALIZATION
LOCUS OF CONTROL
MEDITATION
NONCONFORMING PERSONALITY
PERSONALITY
RELAXATION TRAINING
RESPONSIBILITY AND BEHAVIOR
SOCIAL LEARNING THEORIES

D. H. SHAPIRO