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## ABSTRACT

A 10-week seminar in self-control for 25 selected junior and senior psychology majors at the College of Wooster is described. The seminar was developed in response to increasing popularity of behavior modification and an interest in exploring applications of a science of behavior. The didactic aspect of the course was complemented by an applied emphasis in which each student selected a relatively benign behavior, devised a self-modification procedure, quantitatively evaluated his progress, and submitted a scientific report in the American Psychological Association (APA) publication format. Target behaviors ranged from smoking to assertive behavior and negative comments about others. Short-term gains were reported in most of the programs. Other benefits to students may have included involving oneself in the application of psychology, developing a more scientific approach to solving everyday problems in living, and fostering a less negative attitude toward the control of behavior. The paper concludes with an annotated bibliography of four texts suitable for use in undergraduate self-modification seminars. (Author/AV)

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# APPLICATIONS OF LEARNING THEORY: A COURSE IN SELF-CONTROL

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## ABSTRACT

The increasing popularity of behavior modification in departments of psychology and an interest in exploring applications of a science of behavior led to presenting a 10 week seminar in self-control to 25 selected junior and senior psychology majors. The didactic aspect of the seminar was complimented by an applied emphasis in which each student selected a relatively benign behavior, devised a self-modification procedure, quantitatively evaluated his progress, and submitted a scientific report in the APA publication format. Target behaviors ranged from smoking to assertive behavior and negative comments about others. Short-term gains were reported in most of the programs. Less quantifiable benefits for the students may have included personal involvement in the application of psychology, developing a more scientific approach to solving everyday problems in living, and fostering a more humane and less negative attitude toward the control of behavior. Recommendations are made for future seminars in self-control.

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## APPLICATIONS OF LEARNING THEORY: A COURSE IN SELF-CONTROL

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Research by Benassi and Lanson (1972) indicates that there is an almost linear growth (increasing by more than 22% per year) in the number of behavior modification courses offered at graduate and undergraduate colleges and universities. Most of these courses tended to emphasize clinical or educational applications with a total of four institutions indicating that even a modest amount of attention was given to self-control or self-modification. Nonetheless, there is a developing "self-control literature" which represents a viable segment of the behavior modification literature. The emerging literature may have been partially inspired by an interest in humanistic behaviorism (Avila, 1972; Thoresen and Mahoney, 1974; and Mahoney, 1974). This movement attempts to apply behavior technology for humanistic ends. The basic assumption is that the individual himself is the most effective manipulator of the consequences of his own behavior. Mahoney and Thoreson (1974) have captured this assumption with the statement, "know thy controlling variables." The self-control literature could provide an answer to the humanistic psychologists' criticisms of behaviorism. The modification of one's own behavior using principles

of learning attempts to personalize what at times seems to be a rather impersonal technology or therapy that has been rather exclusively applied to the mentally retarded, psychotics, children, and rats (Miller, 1970).

#### RATIONALE FOR A SELF-MODIFICATION COURSE

An awareness of the growing number of courses in behavior modification being offered at other colleges and universities was occurring at the same time there was increasing knowledge, background, and interest in this area among our own students at the College of Wooster. In addition, the department of psychology at the College was developing a series of new courses which were intended to help the students "take the leap from the ivory tower of academe to real world applications and back to the tower." A seminar in self-modification appeared to be an excellent opportunity to encourage students to apply principles of learning to the modification of their own behavior for the purpose of encouraging a better appreciation of behavior technology.

#### SCREENING PARTICIPANTS FOR THE SEMINAR

Several criteria were used for selecting students for the seminar. The course was available to junior and senior psychology majors who had an introductory course in psychology, statistics, and the laboratory course entitled, Learning, Motivation, and Physiological Psychology. Individuals interested in the course were informally evaluated to avoid inclusion of individuals for which the course might be aversive or counter-productive. The instructors explained to each student that the course would involve the modification of the behavior primarily as an

educational experience rather than a means of changing serious behavioral problems.

Our experience has indicated that the enthusiasm of most students was commonly moderated by concerns about the self-modification project and specifically with apprehension about the type of target behavior that would be acceptable. Assurances that the target behavior should be relatively benign and unembarrassing was sufficient to counteract most of the expressed concerns. It was common for some students to remain perplexed about what constituted a relatively benign and acceptable target behavior. Another common fear was that their grade might be adversely affected by a failure to successfully modify their target behavior. Care was taken to explain that grading was based on their mastery and application of principles of learning rather than the successful modification of their target behavior or instituting profound changes in their entire behavioral repertoire (a kind of behavioral self-actualization).

#### FORMAT OF THE COURSE

The seminar was confined to a ten week period which necessitated a rather rigorous schedule. During the first two weeks, the agenda was focused on a book by Watson and Tharp entitled, Self-Directed Behavior: Self-Modification for Personal Adjustment, 1972. This text appears to be nearly the only available material tailored to instructing students in the operant modification of overt behavior in a manner which reduces the risk of precipitating adverse consequences of such a venture. During this same period of time, the students were instructed to keep a rather subjective and unsystematic behavioral diary for seven days.

The diary served to sensitize the students to the range of possible overt target behaviors as well as train them to attend to the antecedents and consequences of their behavior. Each student was encouraged to utilize operant terminology in their diary descriptions and generate hypotheses regarding the stimuli which may be controlling specific behaviors.

By the conclusion of the behavioral diary most of the students had identified relatively circumscribed and benign target behaviors as well as potentially effective reinforcing stimuli which could be flexibly applied in a self-modification project. Class discussions served to encourage a more precise refinement in the definition and utilization of both target behaviors and reinforcing stimuli.

At the beginning of the third week of classes, each student submitted a written procedure including a behavioral contract. This was written according to the APA writing style which encouraged each individual to conceptualize their project as the N=1 experiment. The following fourteen days were reserved for establishing a base rate for the target behaviors except in cases where the student's target behavior occurred at an unusually low or nonexistent rate. While they were in the process of establishing a base rate, the class sessions focused on working on specific problems that individual students were encountering as well as discussing assigned readings from other required texts. The references in Appendix A reflect the range of materials available to instructors interested in offering a similar course.

During the fifth week of classes and for the subsequent twenty-one days, the students began implementing their self-control regimens. Some of the commonly reported problems during the self-control interventions

were: 1) failure for the behavior to change over base rate, 2) the temptation to "cheat" because the reinforcement schedule either deprived the individual of expected reinforcements or had aversive properties for other individuals with whom the students were in frequent contact, 3) difficulties in adequately defining and accurately monitoring the target behaviors, 4) failure to select stimuli with adequate reinforcing properties, and 5) a tendency to avoid changing the self-modification strategy once it had been initiated although the impact was tenuous. During this segment of the course, a recurrent theme during the class discussions centered on the academic consequences as well as the "loss of face" associated with "failure" of an intervention strategy. Care was taken to adequately discuss and resolve all the above problems.

At the conclusion of the self-modification period of three weeks, the students focused their attention on analyzing their data and writing up the results according to the APA format for scientific writing. The papers included an introduction which reviewed relevant theory and research, a method section, result section, and discussion as well as all the appropriate tables, figures, and appendices. Essentially, each student completed the course with a N=1 study and scientific report.

While they worked on analyzing data produced in their own self-modification projects, each student presented papers dealing with the use of punishment for the modification of a variety of behaviors including speech pathology, sexual deviations, alcoholism, aggression, and nocturnal enuresis. Inclusion of a seminar on punishment was justified because the students had been requested to avoid the use of aversive stimuli in their own self-modification projects. The punishment seminar served to compensate

for their lack of exposure to information in this area during preceding sections of the course.

Thus far, approximately twenty-five students have completed the course. Their target behaviors have focused on smoking, verbal complaining, negative comments about others, exercising, weight control, nail biting, studying, and assertive behavior. Only a minority of students have been unsuccessful. The majority have reported the successful modification of their respective target behaviors by the end of the course. "Backsliding" has been apparent in some cases.

Students reporting "failures" during the course have some characteristics in common. Obstacles to success have ranged from poorly defined problems, excessively ambitious programs in which an effort was made to radically change behavior in a brief period, highly complex target behaviors without articulation and analysis of their component parts, inadequate reinforcement contingencies, programs which were aversive to both the student and others, and the use of stimuli with poor reinforcing properties. In our experience, students generally have difficulty developing intervention programs using positive reinforcement without recourse to aversive stimuli.

#### A POST HOC EVALUATION OF THE SEMINAR

An intended benefit of the seminar was to encourage the students to develop skills in applying academically oriented principles of learning to problems in the natural environment. The suspected advantages of accomplishing this goal by focusing on self-modification of behavior are several. First, highly educated students tend to



regard behavior control technology as being generally effective for intervention with children and the mentally retarded. Little applicability to the "real world of adult behaviors" can be envisioned. Seldom do students construe their own behavior within a learning theory framework, but prefer to believe in self-determination in the rather mystical language of "free will" and "will power." The seminar seriously challenged their own implicit psychology and developed an alternative belief system dominated by such dictums as "know thy controlling variables" and "manipulate thy controlling variables for the benefit of one's self and others." Several individuals reported developing a far more practical and useful working theory of human behavior.

Second, students are frequently impressed with the scientific rigor of behaviorism and the values of humanism. Rarely do students establish a balance between the two forces in psychology. The general philosophy of a self-modification seminar can serve to integrate the two theoretical systems as embodied in the term humanistic behaviorism. This combination of two opposing forces in psychology emphasizes the use of the technology derived from behaviorism to accomplish humanistic goals. In a self-modification course, behaviorism tends to lose some of its impersonal connotations.

Third, a course in self-modification encourages the utilization of scientific methodology outside the laboratory and in the daily lives of the students. This type of course encourages students to conceive of scientific methodology as a practical learning strategy. In addition, a self-modification course clearly encourages a more operational, objective, and perhaps useful type of self-awareness as well as a concrete

method of self-change which emphasizes verification and accountability.

Fourth, a seminar in self-modification brings the abstractions of academe down to an applied level which actively involves the students. This involvement appears enhanced by the students' use of control technology in order to achieve a consequence that they prefer for themselves. In many respects, the opportunity exists for them to "get more than a grade" out of the course.

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- Mahoney, M. J. Cognition and behavior modification. Cambridge, Mass.: Ballinger, 1974.
- Thoresen, C. E. and Mahoney, M. J. Behavioral self-control. New York: Holt, Rinehart and Winston, 1974.
- Watson, D. L. and Tharp, R. G. Self-directed behavior: Self-modification for personal adjustment. Belmont, California: Brooks/Cole, 1972.

## APPENDIX A

ANNOTATED BIBLIOGRAPHY OF SEVERAL TEXTS SUITABLE FOR USE  
IN AN UNDERGRADUATE SELF-MODIFICATION SEMINAR

Goldfried, Marvin R. and Merbaum, Michael. (Eds.) Behavior change through self-control. New York: Holt, Rinehart, and Winston, Inc., 1973.

This edited collection contains a series of theoretical and empirical studies which focus on self-modification. Covert behaviors and intervention techniques tend to be emphasized. Articles largely focus on maladaptive behaviors such as commonly found in clinic populations.

Mahoney, Michael J. and Thoresen, Carl E. Self-control: Power to the person. Monterey, California: Brooks/Cole Publishing Company, 1974.

The authors provide an extensive introduction to the theory and research in the area of self-modification with some comments about how to institute a successful program. The second part of the book contains a series of articles by a variety of authors who discuss the theory and research or report their own empirical studies.

Thoresen, Carl and Mahoney, Michael. Behavioral self-control. New York: Holt, Rinehart, and Winston, Inc., 1974.

The book represents one of the best references for undergraduate students because of the blending of theory, research, and technology. Overt and covert target behaviors are discussed along with a range of techniques used in self-modification programs. Also, the authors discuss issues of freedom, self-determination, and behavioral humanism.

Watson, David L. and Tharp, Roland G. Self-directed behavior: Self-modification for personal adjustment. Monterey, California: Brooks/Cole Publishing Company, 1972.

This is a parsimonious and clearly written book which explains how to conduct a self-modification program from beginning to end. The book focuses rather exclusively on overt target behaviors, operant technology, and emphasizes the use of positive reinforcement.