BEHAVIOR MODIFICATION IN INSTITUTIONAL SETTINGS

Teodoro Ayllon*

The major premise underlying behavior modification techniques is that behavior is governed largely by environmental events.[1] A major avenue, therefore, for acquiring new behavior patterns is through either structured or unstructured learning in response to such events. Using established procedures in the area of social learning to set the conditions under which this new learning, and hence new behavior, will be acquired, the behavior therapist can attempt to structure behavior.

This approach has three distinguishing characteristics. First, instead of attempting to explain a psychological problem or emotional conflict in abstract terms, the behavioral therapist examines the individual's unique behavior in relation to his immediate social environment. Second, treatment is then tailored to the individual, and evaluation of treatment effectiveness is accomplished using predetermined criteria based on the individual's unique characteristics. Finally, if evaluation shows that the procedures are ineffective, the treatment is restructured. Thus, the procedures are self-correcting. The approach of behavior modification is, therefore, more pragmatic and empirical than other, largely theoretical, psychological approaches.

Treatment of a child who does not want to go to school may serve to exemplify the behavioralist's approach. Instead of defining the child's psychic conflict as "school phobia," the problem would be

* Professor of Psychology and Special Education, Georgia State University. B.A. 1954, M.A. 1955, University of Kansas; Ph.D. 1959, University of Houston.

1. Indeed, environmental events shape our character throughout life. The only difference between behavior modification and other approaches to changing behavior is one of degree. Aversive conditioning is common in experience; for example, the child who learns to fear fire after being burned. By systematic application, however, behavior modification succeeds where other approaches fail. *See* Roos, *Human Rights and Behavior Modification*, 12 MENTAL RETARDATION, June 1974, at 4.

behaviorally defined as low or zero school attendance.[2] The advantage of such a tactic is real; it is not a mere exercise in semantics. Evaluation of treatment effectiveness is well advanced when the problem can be set in a readily observable and quantifiable domain, as opposed to a reified, mentally-based domain. Thus, 90 or 100 percent school attendance becomes the performance criterion of treatment effectiveness against which the child's progress is measured. Opening the problem and evaluation criteria to quantification and direct observation allows the behavioral therapist to determine whether or not particular techniques change the behavior problem.

MAJOR TECHNIQUES OF BEHAVIOR MODIFICATION

Systematic Desensitization

Among the most often used techniques in behavior modification are token economies, aversive conditioning, and systematic desensitization. The last technique is particularly useful in inducing behavioral change in an individual whose unadaptive or neurotic behavior was acquired in an anxiety generating situation.[3] Systematic desensitization therapy amounts to systematic elimination of the anxiety response associated with a given stimulus.[4] For example, phobias in general, such as acrophobia, the fear of crowds, and other psychological problems associated with emotional inhibition,[5] have been treated through systematic desensitization.[6]

The therapy has several distinguishing characteristics. The patient is first put into a state of deep relaxation. While in this state he identifies the different situations that might give rise to his neurotic reaction, and then, if there are more than one, he ranks them in order of the probability that they might trigger the neurotic reaction.[7] The result is a graduated hierarchy of situations that produce anxiety in the patient. By exposing the patient to the least offensive situation and then gradually working up the hierarchy, the therapist can desensitize the subject.[8]

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2. Ayllon, Smith & Rogers, *Behavioral Management of School Phobia*, 1 J. BEHAVIOR THERAPY & EXPERIMENTAL PSYCHIATRY 125, 126 (1970).

3. *See generally* Paul, *Outcome of Systematic Desensitization*, in BEHAVIOR THERAPY: APPRAISAL AND STATUS 63 (C. Franks ed. 1969); Russell, *The Power of Behavior Control: A Critique of Behavior Modification Methods*, 30 J. CLINICAL PSYCHOLOGY 111, 117-18 (1974).

4. *See generally* J. WOLPE, PSYCHOTHERAPY BY RECIPROCAL INHIBITION (1958). Joseph Wolpe pioneered the technique. The historical origin and development is traced in Paul, *supra* note 3, at 64-66.

5. Some examples would be insomnia, shyness, homosexuality, and frigidity.

6. Systematic desensitization has been applied in mental health settings such as clinics and hospitals and in general practice.

7. The procedure is described in detail in Paul, *supra* note 3, at 68-70. The necessity for relaxation is in dispute.

8. For an exhaustive listing of medical articles on systematic desensitization, see W. MORROW, BEHAVIOR THERAPY BIBLIOGRAPHY 1950-1969, 156-57 (1971).

The Token Economy

Another major technique in behavior modification therapy is the token economy.[9] A quasi-economic system is established within the institution, and desired behavior is rewarded with tokens. Specifically, this set of complementary procedures is characterized by three features. First, as in other behavior modification techniques, the behavior that is the major focus of the treatment is defined in performance rather than psychic terms.[10] Second, a contractual arrangement is established between the patient and the hospital administration setting forth the rewards and penalties associated with certain conduct. For ease of operation, a currency system using tokens is instituted.[11] Third, as motivation to induce the target behaviors, a wide range of backup rewards, privileges, and items are made available to the patient in exchange for tokens. By reducing the time lag between payments of tokens and the purchase of rewards, the currency system can maintain an optimal level of motivation.

The token economy technique has been used in a variety of situations. In mental hospitals the technique has had a series of successful applications. This is in large measure due to the fact that the token economy has been used to eliminate symptoms. For example, auditory hallucinations, hypochondriasis, and chronic refusal to eat have been eliminated using token economies.[12]

The token economy system has been used in schools for both retarded and normal children. In the case of retarded children, treat-

9. The token economy was developed in a ward of chronically psychotic female patients at the Anna State Hospital in Illinois. T. AYLLON & N. AZRIN, THE TOKEN ECONOMY: A MOTIVATIONAL SYSTEM FOR THERAPY AND REHABILITATION at v, 16 (1968) [hereinafter cited as THE TOKEN ECONOMY]. The literature on token economies is now extensive. *See* Davison, *Appraisal of Behavior Modification Techniques with Adults in Institutional Settings*, in BEHAVIOR THERAPY: APPRAISAL AND STATUS 220, 229-35 (C. Franks ed. 1969); Kazdin & Bootzin, *The Token Economy: An Evaluation Review*, 5 J. APPLIED BEHAVIOR ANALYSIS 343 (1972). The legal problems have been exposed in Wexler, *Of Rights and Reinforcers*, 11 SAN DIEGO L. REV. 957 (1974) [hereinafter cited as Wexler, *Of Rights and Reinforcers*]; Wexler, *Token and Taboo: Behavior Modification, Token Economies, and the Law*, 61 CALIF. L. REV. 81 (1973).

10. While the performance objectives are often assumed to be clear-cut, the fact is that they are typically couched in terms that are abstract, mental, or largely unobservable. Therefore, for such objectives to be amenable to evaluation, further refinement towards objective definition is necessary.

11. Specially designed tangible items such as points, green stamps, credit cards, and similar symbols have been used as tokens.

12. Ayllon & Azrin, *The Measurement and Reinforcement of Behavior of Psychotics*, 8 J. EXPERIMENTAL ANALYSIS OF BEHAVIOR 357 (1968); Ayllon & Haughton, *Control of the Behavior of Schizophrenic Patients by Food*, 5 J. EXPERIMENTAL ANALYSIS OF BEHAVIOR 343 (1962); *see* Atthowe & Krasner, *Preliminary Report on the Application of Contingent Reinforcement Procedures (Token Economy) on a "Chronic" Psychiatric Ward*, 73 J. ABNORMAL PSYCHOLOGY 37 (1968); Lloyd & Abel, *Performance on a Token Economy Psychiatric Ward: A Two-Year Summary*, 8 BEHAVIOR RESEARCH & THERAPY 1 (1970). *See generally* THE TOKEN ECONOMY, *supra* note 9; Kazdin & Bootzin, *supra* note 9.

ment objectives have included teaching academic skills such as reading, writing, and arithmetic, as well as social skills such as speech fluency and good eating habits.[13] Schools for normal children have used the system for eliminating discipline problems, raising attention and concentration levels,[14] and enhancing academic performance.[15]

The token economy system has recently been applied to the field of criminal corrections. These efforts have involved institutionalized delinquents,[16] youthful offenders,[17] and adult offenders.[18] Treatment objectives have included improving educational and vocational performance, controlling discipline problems, and the rationalized management of detained delinquents.[19] In addition, the token economy has been used to prevent delinquent behavior through placement of predelinquent boys in residential, home-style living arrangements.[20] Treatment objectives in this residential placement program have included modification of undesirable social behavior, development of new behavior in the community, development of self-control, and instillment of responsibility for one's behavior.

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13. *Cf.* Birnbrauer, Wolf, Kidder & Tague, *Classroom Behavior of Retarded Pupils with Token Reinforcement*, 2 J. EXPERIMENTAL CHILD PSYCHOLOGY 219 (1965).

14. O'Leary, Becker, Evans & Saudargas, *A Token Reinforcement Program in a Public School: A Replication and Systematic Analysis*, 2 J. APPLIED BEHAVIOR ANALYSIS 3, 8-11 (1969).

15. Ayllon & Roberts, *Eliminating Discipline Problems by Strengthening Academic Performance*, 7 J. APPLIED BEHAVIOR ANALYSIS 71, 74-75 (1974); Lovitt & Curtiss, *Academic Response Rate as a Function of Teacher—And Self-Imposed Contingencies*, 2 J. APPLIED BEHAVIOR ANALYSIS 49, 52 (1969). In one study with disturbed adolescents, however, a token economy designed to increase productivity in classwork resulted in an increase in quantity but a decrease in quality. Cotler, Applegate, King & Kristal, *Establishing a Token Economy Program in a State Hospital Classroom: A Lesson in Training Student and Teacher*, 3 BEHAVIOR THERAPY 209, 214-17 (1972).

16. Burchard & Tyler, *The Modification of Delinquent Behaviour Through Operant Conditioning*, 2 BEHAVIOUR RESEARCH & THERAPY 245 (1965).

17. H. COHEN, J. FILIPCZAK & J. BIS, AN INITIAL STUDY OF CONTINGENCIES APPLICABLE TO SPECIAL EDUCATION (1967).

18. Milan & McKee, *Behavior Modification: Principles and Applications in Corrections*, in HANDBOOK OF CRIMINOLOGY (D. Glaser ed. 1974); Boren & Colman, *Some Experiments on Reinforcement Principles Within Psychiatric Ward for Delinquent Soldiers*, 3 J. APPLIED BEHAVIOR ANALYSIS 29 (1970).

19. Again, one of the major problems in the application of behavioral technology to prisons is definition of the inmates' problems and the objectives of the prison. While the inmates' problems have often been conceptualized in a psychological manner involving pathological aggression toward society, this approach limits evaluation of a treatment's effectiveness. A behavioral redefinition of the inmates' problems involves pinpointing the areas of social interaction that require specific skills. A step in that direction is reflected in the selection of behaviors to be taught to the inmates while in prison. In selecting vocational, educational, and social objectives for therapy or treatment, the prison becomes associated with rehabilitative and educational efforts rather than with custodial goals.

20. This program included boys who were in trouble with their school or community or who were largely uncontrollable. Phillips, *Achievement Place: Token Reinforcement Procedures in a Home-Style Rehabilitation Setting for "Pre-Delinquent" Boys*, 1 J. APPLIED BEHAVIOR ANALYSIS 213, 213-14 (1968). Phillips, Phillips, Fixsen & Wolf, *Achievement Place: Modification of the Behaviors of Pre-Delinquent Boys Within a Token Economy*, 4 J. APPLIED BEHAVIOR ANALYSIS 45, 45-46 (1971).

Aversive Conditioning

Another method of behavior modification is aversive conditioning.[21] It has been defined as "an attempt to associate an undesirable behaviour pattern with unpleasant stimulation or to make the unpleasant stimulation a consequence of the undesirable behaviour."[22] Aversive conditioning decreases inappropriate or maladaptive behavior by using negative stimuli. For inappropriate behavior, such as when an autistic[23] child bangs his head, a negative stimulus, such as electric shock to the thigh, would be the consequence. For maladaptive behavior, such as homosexuality, the negative stimulus is paired to a stimulus that produces the maladaptive response. For example, the homosexual would be shocked whenever he is sexually aroused by a photo of a nude male. These negative stimuli should decrease head-banging by the autistic child and sexual arousal by the homosexual. The problem, however, is that while these behaviors have been broken, no new adaptive behaviors have been established in their place.[24] Thus, in order to be used effectively, aversive conditioning should be used in conjunction with therapy that will provide positive reinforcement and thereby build appropriate and functional behavior.

Aversive conditioning is typically reserved for behavior problems which will not decrease through any positive conditioning or where the client involved has agreed to this method of treatment. For the most part, aversive conditioning has been used with the most difficult of populations to work with, autistic children. Here, aversive stimuli, such as shock, have been used to save a child's life.[25] This method

21. *See generally* S. RACHMAN & J. TEASDALE, AVERSION THERAPY AND BEHAVIOR DISORDERS: AN ANALYSIS (1969); Rachman & Teasdale, *Aversion Therapy: An Appraisal*, in BEHAVIOR THERAPY: APPRAISAL AND STATUS 279-320 (C. Franks ed. 1969). *See also* W. MORROW, *supra* note 8, at 154-55 (collecting sources).

22. S. RACHMAN & J. TEASDALE, *supra* note 21, at xii.

23. Autism is a form of childhood schizophrenia characterized by acting out and withdrawal. The autistic child is apt to perform acts of self-mutilation and head banging. Developmental language disorders and a marked inability to adjust socially are also characteristic. DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 168 (25th ed. 1974).

24. Neither homosexuality nor heterosexuality fills the vacuum created when the other is extinguished. *Money, Strategy, Ethics, Behavior Modification, and Homosexuality*, 2 ARCHIVES OF SEXUAL BEHAVIOR 79 (1972) (editorial). It has been suggested that the proper way to extinguish homosexuality is to reward the subject with a homosexual experience after he achieves a heterosexual experience. Gradually, the number of heterosexual experiences needed to achieve a homosexual experience is increased until the frequency of homosexual activity is minimized or extinguished. *Id.* at 79-80.

The necessity of shock therapy to reduce homosexuality has been questioned. It has been observed that a male homosexual must be "strongly motivated toward change . . . to subject himself to a series of such shocks visit after visit. . . . [I]f other forms of psychotherapy were limited only to such a select group of exceptionally motivated homosexuals the results also would be better than average." Marmor, *Dynamic Psychotherapy and Behavior Therapy*, 24 ARCHIVES OF GENERAL PSYCHIATRYY 22, 25 (1971).

25. In a laboratory setting, electric shock has been delivered to children who climb to dangerous heights. Risley, *The Effects and Side Effects of Punishing the Autistic Behavior of a Deviant Child*, 1 J. APPLIED BEHAVIOR ANALYSIS 25-30 (1968). Shock also has been delivered to autistic children who engage in severe head banging and self-

also has been used with homosexuals, transvestites, and people with fetishes who have agreed to undergo such therapy in a laboratory or a clinic.[26] Aversive conditioning, in the form of shock or chemicals which produce a bad taste, has also been used with alcoholics, drug addicts, and excessive smokers.[27] In general, these techniques are used only with behaviors which are highly resistant to change by any other type of procedure.

One of the major criticisms of aversive conditioning is that it produces bad side effects such as avoidance, escape, fear, and various other emotional responses. In treatments performed by very competent therapists, however, these negative side effects were not produced in autistic children.[28] Parents, teachers, and some professionals who do not have such competency have clearly produced inappropriate behavior, including anxiety, truancy, stealing, lying, and various nervous habits. Aversive conditioning, therefore, should be used only as a last resort, after all positive programs to change behavior have failed. Even then, it should be carried out only with the greatest of care and only if the persons administering the treatment are accountable for their actions.

Further, the use of aversive conditioning should always be well monitored.[29] The technique of defining behavior in measurable terms, as previously mentioned, is helpful once again, for the degree of success of the aversive therapy can be carefully observed. In this manner, the therapy can be precisely administered, avoiding application of aversive stimuli in unnecessary amounts, and thereby minimizing the collateral production of inappropriate behavior.

Alternatives to Aversive Conditioning

Because of the problems[30] associated with the use of aversive stimuli, other less objectionable techniques have been developed. Some procedures try to minimize reinforcement of inappropriate behavior. Total withholding of reinforcement is termed extinction.[31] For

mutilation. Lovaas & Simmons, *Manipulation of Self-Destruction in Three Retarded Children*, 2 J. APPLIED BEHAVIOR ANALYSIS 143 (1969).

26. *See* Marks & Gelder, *Transvestism and Fetishism: Clinical and Psychological Changes During Faradic Aversion*, 113 BRITISH J. PSYCHIATRY 711 (1967).

27. *See generally* A. BANDURA, PRINCIPLES OF BEHAVIOR MODIFICATION 501-54 (1969).

28. *See* Lovaas, Schaeffer & Simmons, *Building Social Behavior in Autistic Children by Use of Electric Shock*, 1 J. EXPERIMENTAL RESEARCH IN PERSONALITY 99, 106-08 (1965); Risley, *supra* note 25, at 21, 32-34.

29. *Accord*, Roos, *supra* note 1, at 5.

30. *See* text & note 37 *infra*.

31. Ayllon & Michael, *The Psychiatric Nurse as a Behavioral Engineer*, 2 J. EXPERIMENTAL ANALYSIS OF BEHAVIOR 323 (1959). *See generally* Sherman & Baer, *Appraisal of Operant Therapy Techniques with Children and Adults*, in BEHAVIOR THERAPY: APPRAISAL AND STATUS 192, 215-16 (C. Franks ed. 1969).

example, when the class clown starts to disrupt his classroom to get attention, the teacher and other students, using extinction therapy, would totally ignore his antics, thereby refusing the reinforcement he seeks. Withholding reinforcement for brief periods is termed time-out therapy.[32] For example, in one study an autistic child seeking social reinforcement of his tantrums and self-destructive behavior was placed alone in his room for 10 minutes whenever he exhibited such behavior.[33] Similarly, to the prison inmate who views group association as rewarding, placement in solitary confinement also may be considered a form of time-out therapy.[34]

Another alternative to aversion therapy is the response-cost technique. Certain bad behavior will entail a "cost" to the patient; something of value to him is removed from his environment in response to inappropriate behavior.[35] Thus, a cartoon show is turned off when a child sucks his thumb,[36] or a patient in a token economy must return tokens if he engages in inappropriate behavior. In most large settings, such as mental institutions or schools, response-cost and time-out have been used. Response-cost is a particularly useful procedure in settings with a large number of individuals since it can be carried out within the framework of a token economy system.

Although response-cost, time-out, and extinction therapies usually produce less severe side effects than standard aversive therapy, these procedures have certain limitations. They are usually slow in decreasing the target behavior, and, as with aversive conditioning, some undesirable emotional responses may be produced. Therefore, as with other aversion therapy, these techniques should be used in conjunction with a program which builds positive behavior through the use of rewards.

SUGGESTED GUIDELINES FOR THE PRACTICE OF BEHAVIOR MODIFICATION IN INSTITUTIONS

To ensure a proper respect for the ethical problems inherent in

32. *See generally* Sherman & Baer, *supra* note 31, at 212-13.

33. Wolf, Risley & Mees, *Application of Operant Conditioning Procedures to the Behavior Problems of an Autistic Child*, 1 BEHAVIOUR RESEARCH & THERAPY 305, 311 (1964). In another study, children who broke rules applicable to playing pool with other children were isolated for brief periods. Tyler & Brown, *The Use of Swift, Brief Isolation as a Group Control Device for Institutionalized Delinquents*, 5 BEHAVIOUR RESEARCH & THERAPY 1, 2 (1967).

34. A recent United States Supreme Court case has held, however, that prisoners may not be placed in solitary confinement without procedural due process guarantees. Wolff v. McDonnell, 418 U.S. 539, 563-67 (1974).

35. Legal strictures require, however, that certain basic rights, food, and privacy not be removed. Wyatt v. Stickney, 344 F. Supp. 373 (D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974), *noted in* 51 B.U.L. REV. 530 (1971), 86 HARV. L. REV. 1282 (1973), *and* 25 U. FLA. L. REV. 614 (1973).

36. Baer, *Laboratory Control of Thumbsucking by Withdrawal and Representation of Reinforcement*, 5 J. EXPERIMENTAL ANALYSIS OF BEHAVIOR 525 (1962). *See* Sherman & Baer, *supra* note 31, at 212.

behavior modification[37] and to ensure that the inmate receives those legal rights to which he is entitled,[38] it is imperative that rehabilitation therapy be done with the patient's informed consent and be subject to scrutiny throughout the treatment.[39] In this way the patient participates in and is responsible for his own retraining; he is doing, not being done to. The patient, the therapist, and society gain when the manner of rehabiliation is agreeable, satisfying, and growth produc-

37. The ethical issues involved in behavior modification have been widely discussed. *See, e.g.*, B. SKINNER, BEYOND FREEDOM AND DIGNITY (1972); Begelman, *Ethical Issues in Behavioral Control*, 156 J. NERVOUS & MENTAL DISEASE 412 (1973); Cooke & Cooke, *Behavior Modification: Answers to Some Ethical Issues*, 11 PSYCHOLOGY IN THE SCHOOLS 5 (1974); Halleck, *Legal and Ethical Aspects of Behavior Control*, 131 AM. J. PSYCHIATRY 381 (1974); Roos, *supra* note 1. Behavior modification has been attacked as repressive, dehumanizing, and perhaps even part of a conspiracy to control those citizens who deviate from social norms. Halleck, *supra* at 381. Not all practitioners agree. One psychiatrist remarked that "[o]nly in rare and extreme situations are many people excessively concerned about the minutiae of patients' rights . . . ." Cole, 131 AM. J. PSYCHIATRY 927 (1974) (letter to the editor). In response, it has been charged that such statements are "dangerously naive." Halleck, 131 AM. J. PSYCHIATRY 928 (1974) (letter to the editor).

After arguing that behavior modification techniques contain no new power over mankind, one practitioner interestingly concludes that since there can be no meaningful debate about the ethics of methods that do not work, a discussion of the ethics involved in psychological control is now rather academic. Russell, *supra* note 3, at 132. Even so, this argument is premised upon a misconception—that behavioral techniques are due to a Hawthorne or placebo effect. In other words, whatever behavioral change might follow therapy is not due to the therapy, but to preexisting forces. Those who would advance this point argue that behavioral experiments use no controls and that it is therefore a logical fallacy to assume that the cause of the modified behavior was necessarily the therapy. *See* Opton, *Institutional Behavior Modification as a Fraud and Sham*, 17 ARIZ. L. REV. 20, 22 (1975). In behavioral experiments, however, each person is his own control. The effects of behavior modification can be evaluated by terminating the behavioral procedure and observing whether there is reversion to the sort of behavior that the procedures had attempted to change. This on-off experimental design, called ABA design, is used in all behavioral experiments. *See, e.g.*, Tyler & Brown, *supra* note 33. Indeed, from an ethical standpoint, it is far better to use an ABA design for control than to let a group of patients sit idle, without treatment, merely to constitute a scientifically pure control group.

One more point should be made about the efficacy of behavioral techniques. Opponents argue that it is widely recognized that patients in a token economy eventually will decline to do jobs that are not paid and will request assignment to jobs that do pay. "Crazy they may have been, but not that crazy." Opton, *supra* at 25 n.17. This both misses and makes the point. Indeed, such behavior is not crazy. The people involved in these programs, however, have never exhibited such behavior before. In the example given, the token economy has taught the principle of economic utility to persons who never before acted in such a manner. This normal behavior was learned.

Certain ethical problems may be irresolvable. For instance, it is difficult to say what one does with a claustrophobic patient who pleads to be released from confinement, assuming he has previously agreed to treatment precisely outlined. Begelman, *supra* at 417. Of course, the patient should be released. The therapy, however, never gets a chance to work. Perhaps the solution lies in more innovative techniques and more gradual treatment.

38. These include all constitutional rights in general and, in particular, the rights to a residence unit with a screen, a comfortable bed, a locker, a chair, a table, nutritional meals, and social interaction, and the rights to have visitors, attend religious services, wear one's own clothes, have clothes laundered, and exercise outdoors. In general, there is a right to the least restrictive conditions necessary to achieve the purposes of commitment. Wyatt v. Stickney, 344 F. Supp. 373, 379-86 (M.D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974).

39. Legally, however, consent is not required in all circumstances. *See* Friedman, *Legal Regulation of Applied Behavior Analysis in Mental Institutions and Prisons*, 17 ARIZ. L. REV. 39, 68-69 (1975).

ing. Consistent with this view, this Article recommends eight guidelines for the behavior therapist in administering treatment.

1. The patient should be informed of the possible outcome of the treatment.[40] The therapist should try to impart as clear an understanding of the anticipated behavior changes as is possible under the circumstances. One method for accomplishing this objective would be through the use of some form of written agreement.[41] If the skills that are expected to be acquired are spelled out in an agreement, there would be evidence of compliance with the goal of full disclosure. By using these "contracts," the mutual expectations on the part of both the subject and the therapist would be greatly clarified. A comprehensive therapy contract is now in use[42] which sets forth the expected behavior objectives of the treatment, the nature, methods, and duration of the treatment, and the specific criteria and social values that will be used to evaluate and measure the success of the treatment.[43]

2. The patient should be informed of the procedures that will be used in the treatment.[44] While the outcome may be desirable, the means used to achieve this result may be so personally distasteful as to make the individual's voluntary participation unlikely. For example, given the choice between a treatment using a reward system or one using drug-induced vomiting,[45] it is unlikely that a patient would choose the latter method.

3. The patient should be made to feel that he is free to choose whether or not to participate in a program.[46] This issue is of special concern with prison inmates or with involuntarily-committed mental

40. *See* Wyatt v. Stickney, 344 F. Supp. 373, 380 (M.D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974); Halleck, *supra* note 37, at 384; Roos, *supra* note 1, at 5.

41. These agreements appear to be contracts in the legal sense. There is mutuality of consideration—the therapist develops a treatment plan and the patient agrees to a fee. Failure of performance by the therapist, that is, failure of treatment, results in a reduced fee. Legal problems, however, remain. Should the patient fail to use his best effort to comply or if he terminates the treatment, it is not clear whether the therapist has a claim for his full fee. Neither is it clear whether the therapist, by contracting, has guaranteed certain results.

42. An example of such a contract is reproduced in Ayllon & Skuban, *Accountability in Psychotherapy: A Test Case*, 4 J. BEHAVIOR THERAPY & EXPERIMENTAL PSYCHIATRY 19, 22-23 (1973).

43. While this contract is, of course, intended for therapy rather than penal rehabilitation, it also could be used in a prison, thus paving the way for accountability in our prisons.

44. Wyatt v. Stickney, 344 F. Supp. 373, 380 (M.D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974); *cf.* Halleck, *supra* note 37, at 384.

45. In the case of Knecht v. Gillman, 488 F.2d 1136 (8th Cir. 1973), a vomiting inducing drug called apomorphine was injected whenever certain behavioral requirements were not met, such as getting up on time and working. Although the objectives may be desirable, the extremely negative method of achieving them cannot be justified behaviorally since such behaviors can more easily be developed through positive means such as rewards.

46. *See* Wyatt v. Stickney, 344 F. Supp. 373, 380 (M.D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974).

patients who may feel that participation is necessary to achieve parole or release. Every effort should be made by the therapist to remove such implicitly coercive influences and to dispel any individual fear of retribution. Indeed, coercion could have adverse long range consequences since coercion may lead to extreme resentment on the part of the unwilling participant and intensify a desire for vindication against society upon his release.[47]

Freedom of choice does require that the patient be mature enough to make the choice and cognizant of what he is doing. The latter qualification, however, must not be extended too far. The patient should not be so protected by the requirement of informed consent that even when he knows what procedures will be used and accepts them, he is not allowed to participate in a rehabilitative program. The case of *Kaimowitz v. Michigan Department of Mental Health*[48] is an example of such overprotection. Because of the experimental nature of the treatment, the court refused to allow involuntarily-detained mental patients to consent to certain neurosurgical procedures. This is carrying the doctrine of parens patriae to a ridiculous extreme. Essentially, *Kaimowitz* assumed that the patient was not sufficiently mature or aware to know what he wanted for himself. In particular, the criminal patient, such as in *Kaimowitz*, may wish to jeopardize his health in the interest of science, perhaps as a way of repaying a debt to society, as Leopold did with malaria research.[49] The decision should be his.

4. The patient should be able at any time to discontinue his participation in a program without incurring prejudice or penalty. What was acceptable to the patient on paper may in fact turn out to be quite unacceptable in practice. Here again, the therapist must safeguard this right. Neither the therapist's rigor nor administrative convenience should be allowed to contravene the individual's wishes.

5. As an adjunct to the right to discontinue treatment, information necessary to make such a decision should be given the patient. He should be informed of his individual progress as often as he desires and in terms that he can readily understand.[50] False hopes of

47. For example, in Springfield, Missouri in October 1972, a rehabilitative program called START (Special Treatment and Rehabilitative Training) began. This program involved inmates who were arbitrarily denied regular prison conditions without a hearing. For discussions of START, see Friedman, *supra* note 39, at 92-94; Wexler, *Of Rights and Reinforcers, supra* note 9, at 963-64.

48. 42 U.S.L.W. 2063 (C.A. 73-19434-AW, Cir. Ct. Wayne County, Mich., July 10, 1973) (partial report).

49. N. LEOPOLD, LIFE PLUS 99 YEARS 305-38 (1958).

50. Any evaluation index, such as a grade or performance rating, must be made known to the patient or inmate so that he can take part in the decisionmaking body regarding his terminating or continuing a given program.

progress may induce continued participation in a program beyond the point at which the patient might otherwise wish to withdraw. Merely evaluating progress before and after treatment is insufficient, and withholding information for the sake of experimental rigor is unacceptable.

6. The patient is entitled to the treatment, rehabilitation, or education which is suited to his individual needs.[51] Requiring conformity to a single type of treatment or the intentional withholding of treatment through placement in an experimental control group is unacceptable. The need to foster individuality and to facilitate growth toward wholeness and self-actualization must be emphasized. The goal of a penal system, for example, if it is to be truly rehabilitative, should be to assist the development of self-esteem through the active encouragement of unique talents. Decisions should not be made for the patient regarding what he will learn while in the institution.

7. The patient should be given the opportunity to express his feelings, views, and attitudes toward a program. While formal assessment before and after the program is acceptable here, the individual must be given the opportunity to express his opinions at any time during his participation. Often, the counseling group is ostensibly used for this purpose, but it is more honored in breach than in practice.[52] For example, there is often great reluctance on the part of prison inmates to go beyond a superficial level of discussion because of the fear that expression of negative feelings might compromise "good behavior."[53] This is unfortunate since group catharsis may serve a valuable function as a tension releasing mechanism, thereby keeping resentment at a minimum and avoiding future Atticas. Thus, if the inmate is to verbalize openly the feelings he is having in a given program, there must be an acceptance of these views by the staff and an absence of fear of retaliation in the inmate. In short, the patient's full participation in a program should be encouraged. His "good boy" docility should not be the primary concern.

8. Only behavioral techniques that enrich the patient's environment beyond a base guarantee of certain social and personal rights should be employed. An individual choosing not to engage in the rewarded activity should simply experience the absence of reward as opposed to coercion to conform to a given behavior. In general, neither

51. *See* Wyatt v. Stickney, 344 F. Supp. 373, 384-86 (M.D. Ala. 1972), *aff'd sub nom.*, Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974).

52. E. WRIGHT, THE POLITICS OF PUNISHMENT: A CRITICAL ANALYSIS OF PRISONS IN AMERICA 61 (1973).

53. Indeed, there is little to indicate that group counseling has made any significant difference to most inmates. *Id.*

sensory nor social deprivation should be considered as standard procedures to influence the individual's conduct. For example, in the START program[54] which took place in Springfield, Missouri, involuntary prison participants were prohibited from possessing reading material or otherwise using any educational, religious, or political material. They were denied the opportunity to view television or listen to a radio, and their actions were under continual surveillance.[55] In other words, the START program totally altered the confinement conditions of the prisoners and forced them to earn back what had rightfully been theirs upon admission into the institution. These kinds of sensory and social deprivations are not standard practices in behavior modification.[56] Further, such heroic means for changing behavior have typically failed to show that alternative techniques were inadequate.

RECOMMENDATIONS FOR THE USE OF BEHAVIOR MODIFICATION IN INSTITUTIONS

Compliance with the guidelines outlined above should provide assurance of effective treatment and awareness of situations of grave ethical concern. In addition to the guidelines, however, certain recommendations regarding methodology in general and the application of specific techniques can be made.

On the Token Economy and Community Mental Health

The most promising avenue for assuring full protection of the patient's rights may be found in the method of community mental health, which strives to maintain, as extensively as possible, the patient's exposure to his natural environment to ensure that the individual's expectations of himself and society are continued. The token economy system is just such a method since it attempts to maintain the continuity of social expectations and responsibilities that characterize the "natural" contingencies of the outside world.

Nothing will maintain the patient's freedom and responsibility for his own behavior as much as a system that functions as does a token economy—as an extension of the society from which the patient comes. Such an extension guarantees the patient's learning to cope with the demands and responsibilities expected of individuals outside the insti-

54. See discussion note 47 *supra.*

55. The right to be free from unreasonable search and seizure, the right to privacy, the right against cruel and unusual punishment, and the freedoms of religion, speech, and association were alleged to be abridged. *See* Clonce v. Richardson, 379 F. Supp. 338, 352 (W.D. Mo. 1974).

56. Halleck, *supra* note 37, at 384.

tution, thereby preventing disculturation. Further, normalization of social interaction is greatly dependent upon a system that enables individuals to exchange goods for services, favors, and other goods. An exchange system[57] helps the parties involved to assess precisely each other's expectations and the rewards or consequences for meeting or failing to meet these expectations.

Careful attention must be given the method and operation of a token economy. A token economy program is characterized by its empirical definition of target behaviors and the results associated with their achievement. Typically, the "rules" of behavior are explicitly and publicly stated, as are the rewards for observing those rules and the benefits which may be obtained in exchange for tokens. This procedure ensures that all individuals have the basis for exercising an informed choice.[58]

The aspect of choice in the token economy is of crucial importance. Choice, to be meaningful, must allow the person to achieve the consequences attendant upon choosing one thing over another. Once the individual discovers that, irrespective of his desires, he will be made to conform to institutional routine, his responsibility for his own actions is terminated. On the other hand, when the individual discovers that his desires will be respected, he will learn that he must bear the consequences of his own choice, and he will, in turn, learn responsibility for his own actions.

Thus, after the consequences of alternative choices have been outlined to the individual it is crucial that his choice be respected, since only in this manner can demeaning and eroding the individual's self-respect and dignity be avoided and responsibility for his own actions assumed. Acceptance of the consequences of one's own choices, however, will require at least a minimum of exposure to the consequences of other choices. Otherwise, the individual will not have an informed basis for choice.

A corollary of the need for individuals to exercise the free choice that is normally associated with community practices such as a token economy is the necessity for patients to have the right to voluntarily assume their own management. This action might include the patient seeking supervised work opportunities in positions which are both useful to the institution and therapeutic to the patient in terms of in-

57. Any arbitrary unit of exchange, such as gold, silver, blankets, shells, or cigarettes, could be used.

58. Since an individual choosing not to engage in the rewarded activity would simply experience the absence of reward as opposed to coercion to conform to a given behavior, the requirements of the eighth guideline in the previous section are satisfied. *See* text accompanying notes 54-56 *supra*.

creased self-confidence and individual responsibility. It must be borne in mind that when patients are treated in mental institutions as if they were in medical hospitals, the objectives of social reeducation often are confused with those of physical restoration. Behavioral reeducation requires that the social environment in which the patient is living resemble closely that of the environment to which he will return. Therefore, if no expectations or demands are made of the patient in the institution, his reentry to a normal environment will only eventuate in failure because of his unpreparedness for such an experience.

To be sure, behavioral techniques enable the patient, upon commitment, to be shielded from all the demands and social pressures that led to his hospitalization. But gradually and systematically, as the patient improves, he is exposed to greater demands so that he learns to cope with most of the situations that he will encounter in the community. While it is appropriate to protect the patient from labor exploitation,[59] it also must be remembered that such protection must be balanced with efforts to keep the patient optimally motivated so as to improve his condition, to allow him to assume responsibility for his own actions, and eventually to permit his return to society.

On Rewards and Incentives

The major aspect of behavior modification is incentives and their use. While the notion of incentives dates from time immemorial, the sophisticated technology associated with their use is recent. Essentially, it is now known that incentives work under certain, and now well-researched, conditions and fail to work when these conditions have not been met. Current technology eliminates the uncertainty in the use of incentives. The naive notion that incentives ought to work has been rejected through research indicating that under certain conditions incentives may have the opposite effect from that expected.

Incentives intended to encourage certain behavior should only be employed after the display of that behavior. For example, if it is desired to encourage participation in a rehabilitative program, incentives should be used only when the individual has demonstrated some participation. Further, incentives must be meaningful to each individual. Since "one man's meat is another man's poison," it is basic to a behavioral approach to discover and develop meaningful incentives. Refusal to do so indicates failure.

59. This could be accomplished with a job rotation rule requiring that a patient not be allowed to hold the same job without interrruption for more than a week at a time. *See* THE TOKEN ECONOMY, *supra* note 9, at 200-03.

What needs to be emphasized is that there are endless permutations and combinations of ways in which the patient may enjoy the rights given to him. For example, one patient may never make a phone call, even if he has the right to make one weekly, but another patient may wish to make a call daily. It is far too easy to standardize the rights of the individual in the institution. What is more difficult is to minimize regimentation, dependence, and eventually apathy. In an effort to enhance individual choice, variability, and differences, in contrast to conformity and regimentation, highly varied opportunities for self-motivation should be used as incentives to help the patients in their own rehabilitation and to reinforce their right to be different.[60]

While standardization of the rights and privileges used as incentives should be avoided, providing certain basic rights and privileges for all patients, such as food, lodging, ground privileges, and privacy, is legally required.[61] These rights and privileges constitute a floor below which guarantees may not drop.[62] Thus, contingent rewards should be made available in addition to those comforts and pleasures already guaranteed to the individual.[63] For example, if all individuals have been assigned a given room and bed, the reward could be the freedom to select the type of room or bed from among a wide range of choices. This effort would be consistent with developing responsibility for making choices. Additionally, withdrawal and return of personal property and privileges already permitted, though not required as basic, should not be the source of rewards. Regaining the possession of one's personal articles or privileges does not meet the contingent-rewards guideline since it is not an additional incentive. By insisting that rewards be additional to those rights and privileges already guaranteed or granted in an institution, deprivation of rewards will be avoided and enrichment of incentives ensured. As a general rule, it would be both effective and legally defensible to use rewards on a contingent basis so long as these rewards go beyond the minimum rights and privileges enjoyed by the patient. In so doing, the result will be an enriched environment that is not limited to the rights and privileges granted the patients.

60. *Cf.* N. KITTRIE, THE RIGHT TO BE DIFFERENT (1971). The methodology to achieve such objectives is available in the token economy. See text & notes 9-20 *supra.*

61. *See* discussion note 38 *supra.* Since many chronically ill patients may forego such rights, there is need for procedures which ensure that patients enjoy them. In this way, the danger of being deprived of items that are self-reinforcing would be avoided. *See* THE TOKEN ECONOMY, *supra* note 9, at 88-103.

62. Such free access to privileges and incentives is consistent with the priming rule described in THE TOKEN ECONOMY, *supra* note 9, at 91-93.

63. Wexler, *Of Rights and Reinforcers, supra* note 9, at 968-69. Idiosyncratic pleasures, such as feeding kittens, are the most effective reinforcers. Atthowe & Krasner, *supra* note 12, at 38.

On Seclusion

The solitary confinement of a patient in an empty room is still a treatment commonly used in institutions.[64] To justify the use of this procedure it is necessary that such use be constantly evaluated in terms of its effectiveness and that an additional program based on positive rewards be used concurrently with seclusion. By so doing, the cooling off or confinement period will result in a reduction of disturbed or aggressive behavior as the patient experiences the gross difference between seclusion and his interaction with the rewarding environ ment.

On Use of Aversive or Noxious Stimuli

Only when the patient's actions present a clear and imminent danger to his own or other's physical integrity may aversive or noxious stimuli be justified.[65] As was the case with seclusion, the patient must be concurrently exposed to a treatment based primarily on positive rewards. In addition, continuous checks must be made on the effectiveness of aversive procedures. Perhaps the best model for such procedures was pioneered in the use of aversive techniques to develop language and social skills in speech-free and self-abusive autistic children.[66] Unquestionably, the objective was desirable. In addition, the relative effects of a mild electric shock delivered to the child upon his displaying self-mutilation were evaluated. When the child ran to the arms of the investigator, the shock was terminated. The fact that this procedure generated an interest in people was considered a notable achievement since autistic children are characterized by their total social detachment. Finally, a socioeducational program based on positive rewards to ensure that the social gains would in time be self-sustaining was administered.

This work demonstrates the proper technical rationale for the use of aversive procedures. Whenever a shock was delivered to the child, care was taken to provide the child with an opportunity to extricate himself from the situation or to terminate the shock by engaging in a learned behavior. This procedure differs from the use of punishment in that the period of punishment is predetermined; it cannot

64. Roos, *supra* note 1, at 5 (suggesting that a distinction should be drawn between time-out, which is therapeutic, and seclusion, which is long term and merely for the convenience of the staff).

65. For example, head banging, self-mutilation, and violent assaults on others would justify such therapy. Further, punishment and the use of noxious stimuli require the technical supervision of a trained professional since these techniques are easily subject to misuse and abuse.

66. *See* Lovaas, Schaeffer & Simmons, *supra* note 28; Lovaas & Simmons, *supra* note 25.

be terminated by the subject. In using aversive stimuli, the individual subjected to it learns how to terminate it and how to avoid it in the future. This gives the subject control over both the onset and the termination of the stimuli. From a therapeutic viewpoint, generating interest in self-protection may well be the lowest level of motivation upon which the therapist can build complex adaptive behavior.

CONCLUSION

A new technology of behavior modification is rapidly emerging in the areas of therapy and prison rehabilitation. Conclusions may now be drawn as to the effectiveness of specific procedures. Rewards are most effective when they enrich rather than reduce the individual's range of incentives in an institution. Further, aversive procedures are most effective when they are used concurrently with a system of rewards. Because of ethical problems and limited effectiveness, however, aversive procedures, such as electric shock, should be used only in those cases where the individual is physically endangering himself or others. Indeed, heroic procedures such as electric shock are not standard and are of limited value since they teach an individual only what not to do, rather than what to do.

Research shows that it is possible to foster in patients and inmates new behaviors and to develop self-control and responsibility through a motivational system known as the token economy. This system restores to the individual the rights and social obligations found outside the institution. In so doing, the token economy preserves a modicum of social contact between the individual and society at large. Thus, behavior modification, by systematically exposing the individual to rewarding experiences, attempts to teach new and effective ways of meeting the demands of a socially complex world.