

3-1-1991

Harnessing the Power of the Bet: Wagering with the Government as a Mechanism for Social and Individual Change

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Bruce J. Winick, *Harnessing the Power of the Bet: Wagering with the Government as a Mechanism for Social and Individual Change*, 45 U. Miami L. Rev. 737 (1991)

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ARTICLES

Harnessing the Power of the Bet: Wagering with the Government as a Mechanism for Social and Individual Change

BRUCE J. WINICK*

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I. INTRODUCTION

Several years ago I tried to teach my two older children the game of poker. Poker is a game of skill, although luck plays an undeniable role. I fancied myself somewhat of a master of the game, going back to my boyhood days in Brooklyn. But my children were suburban kids who had not yet learned to play. I described the rules and we played for a while but they seemed to be slow learners, even though

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they are bright and had expressed an interest in learning. Then I suggested we play for money—pennies actually, but this new twist in the game had an interesting effect. With a stake in the game, they learned much more quickly.

This episode made me think about several things—dares, and challenges, and bets, and motivation. Now, in my youth, a dare was enough to induce at least some otherwise rational people to attempt some very risky feats of foolishness. Not in my neighborhood, however. We were too sophisticated. But a bet—that was different. “I’ll bet you a dollar you can’t climb the fence.” This challenge, coupled with the dollar reward, provided the added incentive that a mere dare to perform this death-defying act could not. And, unlike the dare, once accepted there was no backing out. After all, backing out at that point would cost a dollar as well as the loss of face that failing to meet a publicly accepted challenge would bring.

Oh, how powerful is the combined incentive to succeed/disincentive to fail of the bet in which the contingency is in the control of the bettor. And oh how seductive a motivator it is to induce attempted performance that would not otherwise seriously be considered.

This Article suggests that society can harness the psychological power of the bet to accomplish a number of very useful social objectives. Its thesis is that a governmental offer to wager with its citizens on the performance of certain acts by them that the government would like to bring about can be a new and powerful technique of social engineering. If our society were differently constructed—if only we had true community—we would solve the social and health problems addressed here through love. Alas, that millennium has not yet arrived. In a world without community, with few social norms, without love, we nonetheless need ways of solving social problems. And the means we use should at least treat people with respect and dignity. Our existing methods frequently are ineffective, sometimes perpetuating the problems we seek to solve. Often they rob people of their dignity. When a society fails to offer any real hope to many of its disadvantaged, social problems are inevitable. Until we can reconstruct society, we need ways of coping with life outside the garden. This proposal is designed to encourage us to think differently about our methods of solving social problems. The proposal is tentative and exploratory, and certainly not ready to be implemented. It is offered in the spirit of stimulating discussion about new regulatory approaches to old, as well as newly emerging, social problems.

This proposal could be seen as deriving from the utilitarianism of Jeremy Bentham and John Stuart Mill, or from modern economic

theory. I prefer the paradigm of psychology. In what follows in Section II, I first analyze several principles of behavioral psychology, showing how wagering with the government can be seen as a new technique combining two established types of behavior therapy—positive reinforcement and aversive conditioning. Behaviorism, at least the radical behaviorism associated with B.F. Skinner—evoking the spectre of manipulative behavior modification of the *Clockwork Orange* variety—has gotten a bad name. But developments in psychology in the 1970's and 1980's, particularly in cognitive and social psychology, have reshaped the traditional behavioral model into a less mechanistic and more individually focused paradigm that provides a more enriched explanation of how people learn and behave.¹ In Section II, I also show how a number of important insights derived from social and cognitive theory can be drawn upon to supplement the traditional behavioral model in explaining the psychological power of the bet.

In Section III, I then suggest several applications of this technique in the public health and social service areas. I show how a number of pressing social problems, ranging from drug addiction to productivity among civil servants to the welfare system, can be understood behaviorally, and can be remedied through creative applications of behavioral psychology, such as the governmental wager. I suggest that the government negotiate with individuals with a variety of social and health problems in an effort to motivate them to undertake changes in their socially injurious behaviors. The government could offer volunteers wishing to rid themselves of such behavior patterns the opportunity to enter into a “wagering” agreement or contingency contract with the government in which explicit goals would jointly be set, and the individual's motivation to achieve them would be enhanced through a combination of agreed-upon rewards for success and penalties or aversive consequences for failure. After considering these three areas—drug addiction, public employee productivity, and welfare—as illustrative, I suggest a number of other applications of wagering in both the public and private sectors. Some of these applications may prove unfeasible, and others may be too politically con-

1. Not all would agree with the synthesis presented here. There remain a variety of camps within psychology: those committed to a more traditional, behavioral orientation, those more cognitively oriented, those more focused on social psychology, those who see themselves as humanistic psychologists, and those more analytically or psychodynamically oriented. See, e.g., Duke & Nowicki, *Theories of Personality and Psychopathology: Schools Derived from Psychology and Philosophy*, in 1 *COMPREHENSIVE TEXTBOOK OF PSYCHIATRY* 432 (5th ed. 1989). The persistence of these different perspectives within psychology, each of which is built on a somewhat different conceptual model, makes it unlikely that any one synthesis, including mine, would achieve universal acceptance.

roversial to attempt. They are offered merely to illustrate possible applications of the technique, and not as proposals ready for implementation.

In Section IV, I analyze the legality and constitutionality of governmental wagering for social change, distinguishing the wager from illegal gambling and comparing it to such arrangements as contingency clauses in construction contracts, tax credits, and plea bargaining, all of which the courts regularly enforce. This Article suggests governmental wagering as a new alternative approach to accomplishing social change. Moreover, because voluntariness is its hallmark, wagering can be seen as less intrusive on constitutional values than existing approaches. Accordingly, Section V concludes that both the public and private sectors should seriously consider harnessing the power of the bet to help individuals achieve their greatest potential.

II. THE PSYCHOLOGICAL POWER OF THE BET

A. *The Wager as an Application of Principles of Behavioral Psychology*

Seen through the lens of behavioral psychology, the bet can be understood as combining principles of positive reinforcement and aversive conditioning, both modern applications of behavior therapy. Behavior therapy generally is defined as the clinical application of experimentally derived principles of psychological learning theory to teach adaptive behavior or to modify maladaptive behavior by means of systematic manipulation of the environment.² The basic principle

2. The term "behavior modification" is sometimes used, but I prefer the narrower term "behavior therapy." "Behavior modification" is often defined expansively to include all treatments designed to bring about a change in behavior, including psychosurgery, electronic stimulation of the brain, electroconvulsive therapy and psychotropic medication. *E.g.*, STAFF OF SUBCOMM. ON CONSTITUTIONAL RIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 93D CONG., 2D SESS., *INDIVIDUAL RIGHTS AND THE FEDERAL ROLE IN BEHAVIOR MODIFICATION* 1, 11 (1974) [hereinafter *INDIVIDUAL RIGHTS AND THE FEDERAL ROLE IN BEHAVIOR MODIFICATION*]. A report prepared by the National Institute of Mental Health uses a narrower definition conforming to professional usage: "[B]ehavior modification will be used to refer to procedures that are based on the explicit and systematic application of principles and technology derived from research in experimental psychology, procedures that involve some change in the social or environmental context of a person's behavior." B. BROWN, L. WIENCKOWSKI & S. STOLZ, *BEHAVIOR MODIFICATION: PERSPECTIVES ON A CURRENT ISSUE* 3 (DHEW Pub. No. (ADM) 75-202, 1975) [hereinafter *NIMH BEHAVIOR MODIFICATION REPORT*]; see also C. FRANKS & G. WILSON, *ANNUAL REVIEW OF BEHAVIOR THERAPY: THEORY AND PRACTICE* 1 (1975); Alberts & Edelman, *Training in Behavior Therapy*, in *INTERNATIONAL HANDBOOK OF BEHAVIOR MODIFICATION AND THERAPY* 213, 215-16 (2d ed. 1990) [hereinafter *INTERNATIONAL HANDBOOK*]; Krasner, *History of Behavior Modification*, in *INTERNATIONAL HANDBOOK*, *supra*, at 3, 8-10. "Applied behavior analysis," a closely related but narrower term, applies primarily to applications of "Skinnerian" or operant conditioning. See Goldiamond, *Singling Out Behavior Modification*

underlying most behavior therapy techniques is that behavior is governed primarily by the environmental events or consequences that follow it. Therefore, the behavior therapist directly manipulates these consequences in order to alter the patient's problematic behavior.³

Behavior therapy postulates that maladaptive behaviors are learned and reinforced by the same principles of conditioning as "normal" responses, and that they therefore may be altered through the systematic application of principles of learning theory validated experimentally in the animal, and now the human, laboratory.⁴

for Legal Regulation: Some Effects on Patient Care, Psychotherapy, and Research in General, 17 ARIZ. L. REV. 105, 107-09 (1975); Milan, *Applied Behavior Analysis*, in INTERNATIONAL HANDBOOK, *supra*, at 67. In common usage, the terms "behavior therapy," "behavior modification," and "applied behavior analysis" are more or less synonymous. See Beck, *Behavior Therapy*, in AMERICAN PSYCHIATRIC ASS'N COMM'N ON PSYCHIATRIC THERAPIES, THE PSYCHIATRIC THERAPIES 485, 486 (T. Karasu ed. 1984); Krasner, *supra*, at 9. For other definitions, see H. KALISH, FROM BEHAVIORAL SCIENCE TO BEHAVIOR MODIFICATION 3 (1981); Beck, *supra*, at 486-87; Friedman, *Legal Regulation of Applied Behavior Analysis in Mental Institutions and Prisons*, 17 ARIZ. L. REV. 39, 44 (1975); Krasner, *supra*, at 8-10; and Whitman, *Behavior Modification: Introduction and Implications*, 24 DE PAUL L. REV. 949, 952-53 (1975). The definition of "behavior therapy" offered in the text, although widely accepted, is admittedly oversimplified. For example, techniques such as "modeling," see *infra* note 32, and "systematic desensitization," see J. WOLPE, PSYCHOTHERAPY BY RECIPROCAL INHIBITION (1958); Beck, *supra*, at 497, both important techniques of behavior therapy, do not easily meet the conditions of the definition. For comprehensive reviews of the various techniques of behavior therapy, see A. BANDURA, PRINCIPLES OF BEHAVIOR MODIFICATION (1969); CONTEMPORARY BEHAVIOR THERAPY: CONCEPTUAL AND EMPIRICAL FOUNDATIONS (G. Wilson & C. Franks eds. 1982) [hereinafter CONTEMPORARY BEHAVIOR THERAPY]; E. GAMBRILL, BEHAVIOR MODIFICATION: HANDBOOK OF ASSESSMENT, INTERVENTION AND EVALUATION (1977); M. GOLDFRIED & G. DAVISON, CLINICAL BEHAVIOR THERAPY (1976); INTERNATIONAL HANDBOOK, *supra*; A. KAZDIN, BEHAVIOR MODIFICATION IN APPLIED SETTINGS (3d ed. 1984); R. RIMM & J. MASTERS, BEHAVIOR THERAPY: TECHNIQUES AND EMPIRICAL FINDINGS (2d ed. 1979); G. WILSON & F. O'LEARY, PRINCIPLES OF BEHAVIOR THERAPY (1980); J. WOLPE, THE PRACTICE OF BEHAVIOR THERAPY (1973); Beck, *supra*; Brady, *Behavior Therapy*, in 2 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY 2143 (3d ed. 1980); and Nathan, *Behavior Therapy*, in HANDBOOK OF PSYCHIATRY 391 (3d ed. 1974).

3. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 1; Atthowe, *Behavior Modification, Behavior Therapy and Environmental Design*, 18 AM. BEHAV. SCI. 637, 639-40 (1975); Ayllon, *Behavior Modification in Institutional Settings*, 17 ARIZ. L. REV. 3 (1975); Friedman, *supra* note 2, at 44; Klofas & Duffee, *The Change Grid and the Active Client: Challenging the Assumptions of Change Agency in the Penal Process*, 8 CRIM. JUST. & BEHAV. 95 (1981).

4. See Agras, *Learning Theory*, in 1 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY, *supra* note 1, at 262; RESEARCH TASK FORCE OF THE NAT'L INST. OF MENTAL HEALTH, RESEARCH IN THE SERVICE OF MENTAL HEALTH 325 (DHEW Pub. No. (ADM) 75-236, 1975) [hereinafter RESEARCH IN THE SERVICE OF MENTAL HEALTH]; Whitman, *supra* note 2, at 952. For alternative perspectives criticizing the predominant role of learning theory in human learning, see Brewer, *There Is No Convincing Evidence for Operant or Classical Conditioning in Adult Humans*, in 1 COGNITION AND THE SYMBOLIC PROCESSES 1 (1974); and McKeachie, *The Decline and Fall of the Laws of Learning*, 3 EDUC. RESEARCHER 7 (Mar. 1974).

Although principles of behavior modification were first introduced into clinical settings less than forty years ago, the past twenty-five years have marked a phenomenal growth in their development and application. Evidence of the general acceptance of behavioral treatment, and of its increasing influence, can be found in the emergence since 1963 of at least eleven new research journals devoted to behavior therapy,⁵ the widespread availability of courses in behavior therapy in psychology doctoral programs, medical schools, and psychiatric residency programs, and the dramatic growth in government-funded research devoted to the field.⁶ Moreover, since 1973, when an American Psychiatric Association Task Force concluded that behavior therapy had progressed sufficiently that it had "much to offer" psychiatry, it has become an increasingly accepted part of modern clinical practice.⁷

Behavior therapy is now widely used for psychological disorders, psychophysiological disorders, marital and family problems, managing institutional populations, and children's behavior problems.⁸

5. See, e.g., ADVANCES BEHAV. RES. & THERAPY (1978); BEHAV. MODIFICATION (1977); BEHAV. RES. & THERAPY (1963); BEHAV. THERAPIST (1978); BEHAV. THERAPY (1970); BEHAVIORISM (1973); BIOFEEDBACK & SELF-REG. (1973); COGNITIVE THERAPY & RES. (1977); J. APPLIED BEHAV. ANALYSIS (1966); J. BEHAV. MED. (1978); J. BEHAV. THERAPY & EXPERIMENTAL PSYCHIATRY (1970). In addition, accounts of behavior therapy and research have spread to the general psychiatric and psychological literature, and textbooks, monographs, and printed proceedings of meetings are appearing at an increasing rate. See Liberman & Bedell, *Behavior Therapy*, in 2 COMPREHENSIVE TEXTBOOK OF PSYCHIATRY, *supra* note 1, at 1462-63; Beck, *supra* note 2, at 485; Brady, *supra* note 2, at 1824; Hoon & Lindsley, *A Comparison of Behavior and Traditional Therapy Publication Activity*, 29 AM. PSYCHOLOGIST 694 (1974). For a graph illustrating the increase in articles about behaviorism, see Willis & Giles, *Behaviorism in the Twentieth Century: What We Have Here is a Failure to Communicate*, 9 BEHAV. THERAPY 15, 18 (1978) (using number of articles about behaviorism referenced in READERS' GUIDE TO PERIODICAL LITERATURE, 1900-74). For listings of more recent literature, see NATIONAL INSTITUTE OF MENTAL HEALTH LIBRARY JOURNAL HOLDINGS LIST (1985); and NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 25-26. Although the largest growth spurt occurred prior to 1973, "[s]ince that time the proliferation of experimental and clinical studies has continued, [and] the number of textbooks [on behavior therapy] has grown exponentially." Beck, *supra* note 2, at 485.

6. See RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 325, 329-30. Sampled in a 1975 survey, eighty-four percent of schools providing doctoral training in psychology offered a course in behavior modification. *Id.* at 325. Such courses are also offered in medical schools and are required in 11% of psychiatric residency programs. *Id.* Moreover, a 1973 American Psychiatric Association Task Force Report on Behavior Therapy in Psychiatry recommended that premedical education include a psychology course devoted to the experimental analysis of behavior, and that training in behavioral psychiatry be made available to all psychiatric residents. *Id.* at 325-26; see also Benassi & Lanson, *A Survey of the Teaching of Behavior Modification in Colleges and Universities*, 27 AM. PSYCHOLOGIST 1063 (1972).

7. See Beck, *supra* note 2, at 485.

8. See RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 325; Beck, *supra* note 2, at 485-86, 495.

These techniques are now applied to virtually all types of mental illness, as well as a variety of other problems, by practitioners ranging from psychiatrists and psychologists to parents, teachers, prison guards, and hospital ward attendants, in settings extending from private practice to hospitals, community mental health centers, schools, prisons, and facilities for juveniles and the mentally retarded.⁹

The basic principles of learning theory that underlie the diverse behavior therapy techniques can be traced to Ivan Pavlov's classic experimental work with dogs.¹⁰ By pairing the ringing of a bell with feeding, Pavlov conditioned the dogs to salivate at the sound of the bell alone. The principles of learning that evolved from these early studies may be classified into two major learning paradigms—classical conditioning and operant conditioning.¹¹ Classical conditioning, based on Pavlov's work, involves respondent or reflex behavior, involuntary behavior mediated primarily by the autonomic nervous system (such as salivation) which is elicited by a preceding stimulus. A neutral (or "conditioned") stimulus (the bell in Pavlov's experiment) which does not normally elicit a response repeatedly is paired with an eliciting (or "unconditioned") stimulus (the food powder) that normally triggers a response (salivation) until the neutral stimulus itself elicits the response, which is then called a "conditioned response" or "conditioned reflex."¹²

Operant or instrumental conditioning, based on the experimental work of E.L. Thorndike¹³ and B.F. Skinner,¹⁴ involves operant behavior—"voluntary" behavioral responses emitted by the subject, as

9. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 3; RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 326; Nathan, *supra* note 2, at 398; Whitman, *supra* note 2, at 953-54. For evidence of the wide-ranging application of behavior therapy in a variety of clinical settings, see any recent issue of the journals cited *supra* note 6.

10. See I. PAVLOV, CONDITIONAL REFLEXES: AN INVESTIGATION OF THE PHYSIOLOGICAL ACTIVITY OF THE CEREBRAL CORTEX (1927); I. PAVLOV, WORK ON THE DIGESTIVE GLANDS (1897); see also H. GLEITMAN, BASIC PSYCHOLOGY 71-77 (1983); RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 85.

11. H. GLEITMAN, *supra* note 10, at 71-90; RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 85-90. A theoretical reexamination of this traditional duality is underway, and "there is reason to hope that simplification of behavior theory through reduction to a single underlying type of behavior process is not far off." *Id.* at 4.

12. H. GLEITMAN, *supra* note 10, at 72-73. For a social cognitive account of classical conditioning, see A. BANDURA, SOCIAL FOUNDATIONS OF THOUGHT AND ACTION: A SOCIAL COGNITIVE THEORY 183 (1986).

13. E. L. THORNDIKE, ANIMAL INTELLIGENCE: AN EXPERIMENTAL STUDY OF THE ASSOCIATIVE PROCESS IN ANIMALS, 2 PSYCHOLOGICAL MONOGRAPHS No. 8 (1898); E. L. THORNDIKE, ANIMAL INTELLIGENCE: EXPERIMENTAL STUDIES (1911); E. L. THORNDIKE, THE FUNDAMENTALS OF LEARNING (1932); see also H. GLEITMAN, *supra* note 10, at 78-81.

14. B.F. SKINNER, SCIENCE AND HUMAN BEHAVIOR (1953); B.F. SKINNER, THE BEHAVIOR OF ORGANISMS (1938); see also H. GLEITMAN, *supra* note 10, at 84-88.

opposed to reflexive behavior elicited by an environmental stimulus. Operant behavior is influenced by subsequent stimulation: It is strengthened or weakened by its consequences. Skinner found that a rat in a box which contained a lever would sooner or later press the lever. If the rat received a food pellet for pressing the bar, its bar pressing behavior increased. If no food pellet was delivered when the rat pressed the bar several times, it ceased to press the lever as frequently. Skinner called this process of increasing or decreasing the probability of future voluntary behavior through manipulation of its consequences "operant conditioning."¹⁵ By repeatedly presenting a rat or a person with a rewarding or reinforcing stimulus (or a punishing or aversive consequence), the rat or person learns to make (or to avoid making) specific responses.

The origins of behavior therapy have been traced to two experiments reported in the early 1920's that applied these basic principles of learning theory, originally developed in experiments with animals, to the behavior of children.¹⁶ J.B. Watson, the founder of modern behavioral psychology, demonstrated that a fear response to a white rat could be conditioned in a young infant by presenting the rat, which previously did not elicit a fear reaction, to the child, followed immediately by a loud noise, a stimulus to which the child had previously responded with fear.¹⁷ After a series of such pairings the rat itself elicited the fear response. Watson also suggested a number of ways in which this conditioned response might be reversed by subsequent learning experiences. Mary Cover Jones subsequently applied this insight to overcome a young boy's fear of rabbits by gradually bringing a rabbit closer while he was eating food that he liked.¹⁸ In

15. B.F. SKINNER, *SCIENCE AND HUMAN BEHAVIOR*, *supra* note 14, at 62-66. Skinner's operant conditioning paradigm bears a close resemblance to Bentham's principle of utility, *see* J. BENTHAM, *AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION* 1 (1789) ("Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*. It is for them alone to . . . determine what we shall do."); J. BENTHAM, *THE RATIONALE OF PUNISHMENT* 19 (1830) ("Pain and pleasure are the great springs of human action."), and to the model of modern economic theory that predicts behavior based on a rational calculus of costs and benefits. *See, e.g.*, R. POSNER, *ECONOMIC ANALYSIS OF LAW* (2d ed. 1977). For a social cognitive account of operant conditioning, *see* A. BANDURA, *supra* note 12, at 13-16, 106-14, 116, 121-22.

16. *See* Ferster, *Behaviorism, Behavior Modification, and Behavior Therapy*, in *READINGS IN LAW AND PSYCHIATRY* 107, 108 (1975); Whitman, *supra* note 2, at 952.

17. Watson & Rayner, *Conditioned Emotional Reactions*, 3 *J. EXPERIMENTAL PSYCHOLOGY* 1 (1920). Watson's classic paper, often referred to as the "Behaviorist Manifesto," was published in 1913. Watson, *Psychology as the Behaviorist Views It*, 20 *PSYCHOLOGY REV.* 158 (1913).

18. Jones, *A Laboratory Study of Fear: The Case of Peter*, *PEDAGOGICAL SEMINARY* 308 (1924); Jones, *The Elimination of Children's Fears*, 7 *J. EXPERIMENTAL PSYCHOLOGY* 382 (1924).

the 1950's these principles began to be applied to the treatment of severely disturbed patients,¹⁹ and they are now widely used for a great variety of conditions.

Ideally, behavior therapy involves mutual agreement between therapist and patient specifying both treatment goals and procedures.²⁰ First, the therapist must perform a "behavioral analysis," a detailed description of the patient's problem behavior. The behavior analysis is designed "to determine the specific context and settings of daily life that distressed the patient and to ascertain the environmental responses that might maintain the patient's maladapted behaviors."²¹ Based on this analysis, the therapist selects and applies one or more of the behavior modification techniques to the patient.

Behavior therapy techniques currently in clinical use may be grouped roughly into three major categories: positive reinforcement, aversion therapy, and systematic desensitization. The bet consists of a combination of the first two.

Positive reinforcement methods are based on operant conditioning. They reward behavioral responses that are sought to be strengthened ("target responses") by following their occurrence with desirable consequences ("reinforcers").²² Such reinforcers may range from basic items like food, water, and a bed ("primary reinforcers") to grounds privileges, movies, religious services, praise, attention, gold stars, money, or tokens or points redeemable for other items or privi-

19. See, e.g., J. WOLPE, *supra* note 2; J. WOLPE & A. LAZARUS, *BEHAVIOR THERAPY TECHNIQUES* (1966); Ayllon & Arzin, *The Measurement and Reinforcement of Behavior of Psychotics*, 8 J. EXPERIMENTAL ANALYSIS BEHAV. 357 (1965); Ayllon & Arzin, *The Psychiatric Nurse as a Behavioral Engineer*, 2 J. EXPERIMENTAL ANALYSIS BEHAV. 323 (1959); Beck, *supra* note 2, at 488-89; Eysenck, *Discussion on the Role of the Psychologist in Psychoanalytic Practice: The Psychologist as Technician*, 45 PROC. ROYAL SOC'Y MED. 447 (1952); Ferster & De Myer, *The Development of Performances in Autistic Children in an Automatically Controlled Environment*, 13 J. CHRONIC DISEASES 312 (1961); Lindsley & Skinner, *A Method for the Experimental Analysis of the Behavior of Psychotic Patients*, 9 AM. PSYCHOLOGIST 419 (1954).

20. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 4; Friedman, *supra* note 2, at 44; Goldiamond, *supra* note 2, at 133-36; Wilson & Davison, *Behavior Therapy: A Road to Self-Control*, PSYCHOLOGY TODAY 54 (Oct. 1975). Increasingly, this agreement is reduced to writing. See Ayllon, *supra* note 3, at 11 ("A comprehensive therapy contract is now in use 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."). For a sample form contract used by the University of Chicago Department of Psychiatry, see Goldiamond, *Toward a Constructional Approach to Social Problems: Ethical and Constitutional Issues Raised by Applied Behavior Analysis*, in 2 BEHAVIORISM 1, 78-80 (1974).

21. RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 326; see also Brady, *supra* note 2, at 2144.

22. See A. BANDURA, *supra* note 2, at 217-92; NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 4-6; Brady, *supra* note 2, at 2147-49.

leges ("secondary reinforcers").²³

The operation of positive reinforcement can be illustrated by a technique frequently used in institutional settings—the token economy.²⁴ Under the token economy, a quasi-economic incentive system is established within an institutional setting under which desired behavior is rewarded with tokens—"generalized" reinforcers—that may be exchanged by the patient for items or privileges otherwise unavailable. Inappropriate behavior can result in either the loss of tokens or a failure to earn tokens. Because the availability of reinforcers is contingent upon performance of the target behavior, that behavior is strengthened in the patient much as bar-pressing activity was strengthened in Skinner's rat.²⁵ A variation on the token economy is the "tier system," where privileges are dependent on the patient's place in a hierarchy of tiers. In this system the patient earns his way from an orientation level, in which privileges are scant or non-exis-

23. See, e.g., Whitman, *supra* note 2, at 955. Sometimes the term "primary reinforcers" is used to refer to all items desired by the patient, while "secondary reinforcers" is used synonymously with "generalized reinforcers" to refer to tokens, or points convertible by the patient to "primary reinforcers." See, e.g., Wexler, *Of Rights and Reinforcers*, 11 SAN DIEGO L. REV. 957, 958 (1974). The selection of reinforcers appropriate to the patient in question often is done through use of the "Premack Principle," which teaches that if the patient naturally engages in certain behaviors with high frequency, then the opportunity to engage in those behaviors can be used as a powerful reinforcer. See Premack, *Toward Empirical Behavior Laws: Positive Reinforcement*, 66 PSYCHOLOGICAL REV. 219 (1959); see also Brady, *supra* note 2, at 2149.

24. See T. AYLLON & N. ARZIN, *THE TOKEN ECONOMY: A MOTIVATIONAL SYSTEM FOR THERAPY AND REHABILITATION* (1968); Liberman & Bedell, *supra* note 5, at 1470; A. KAZDIN, *THE TOKEN ECONOMY: A REVIEW AND EVALUATION* (1977); NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 5; Ayllon, *supra* note 3, at 5-6; Brady, *supra* note 2, at 2147-49. For an analysis of the legal issues raised by the token economy, see Bentley, *Major Legal and Ethical Issues in Behavioral Treatment: Focus on Institutionalized Mental Patients*, 5 BEHAV. SCI. & L. 359 (1987); Wexler, *supra* note 23; and Wexler, *Token and Taboo: Behavior Modification, Token Economies, and the Law*, 61 CALIF. L. REV. 81 (1973).

25. Skinner utilized hungry rats and pigeons in his experiments—those "deprived of food for a certain length of time or until . . . [their] usual body-weight has been slightly reduced"—finding that "the frequency of response which results from reinforcement depends upon the degree of deprivation at the time the response is observed." B.F. SKINNER, *SCIENCE AND HUMAN BEHAVIOR*, *supra* note 14, at 68. In a similar way, token economy programs sometimes place the patient in a state of deprivation at the outset of therapy, providing even primary reinforcers such as meals, water, and a bed only when the patient engages in target behaviors. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 18-19; Wexler, *Behavior Modification Report and Legal Developments*, 18 AM. BEHAV. SCI. 679, 681-82 (1975); Wexler, *supra* note 24, at 87-88. Professor Wexler has suggested that legal developments such as Wyatt v. Stickney, 344 F. Supp. 373 (M.D. Ala. 1972), *aff'd in part sub nom.* Wyatt v. Aderholt, 503 F.2d 1305 (5th Cir. 1974), specifying minimum constitutional standards for facilities for the mentally disabled, by defining as basic rights many of the "primary" reinforcers provided only contingently in token economies, may render such reinforcers legally unavailable in token programs. Wexler, *supra*, at 681-82; Wexler, *supra* note 24, at 93-95.

tent, upward through a ranked series of tiers with increasingly more desirable privileges and conditions.²⁶ The token economy and tier system have been applied in a variety of settings—closed psychiatric wards,²⁷ prisons,²⁸ facilities for delinquents,²⁹ and schools for normal,

26. Wexler, *supra* note 24, at 88. The controversial Federal Bureau of Prisons' Project START, conducted at the Federal Medical Center for Prisoners at Springfield, Missouri, utilized this model from September, 1972, until February, 1974. At entry level, the prisoners selected for the program, described as so repeatedly disruptive as to require continual segregation from the rest of the prison population, were denied such basic privileges as daily showers, exercise, visitors, reading material, personal property, and commissary privileges, which could only be regained by behaving in conformity with the program goals. For a description of Project START, see *Clonce v. Richardson*, 379 F. Supp. 338 (W.D. Mo. 1974); *INDIVIDUAL RIGHTS AND THE FEDERAL ROLE IN BEHAVIOR MODIFICATION*, *supra* note 2, at 31-32, 240-72; and Carlson, *Behavior Modification in the Federal Bureau of Prisons*, 1 NEW ENG. J. PRISON L. 155, 159-63 (1974). Although the government terminated the controversial START project, it became a model for other prison programs. Gaylin & Blatte, *Behavior Modification in Prisons*, 13 AM. CRIM. L. REV. 11, 25 (1974). Another controversial program utilizing a tier system is Maryland's Patuxent Institute for "defective delinquents." See *Patuxent Institution*, 5 BULL. AM. ACAD. PSYCHIATRY & L. 116-267 (1977); Stanford, *A Model Clockwork-Orange Prison*, N.Y. Times, Sept. 17, 1972, § 6 (Magazine), at 9, 71-84; see also *Morgan v. Sproat*, 432 F. Supp. 1130 (S.D. Miss. 1977) (tier program in juvenile training school). For a detailed description of the workings of a tier system used at a closed adolescent treatment center, see *INDIVIDUAL RIGHTS AND THE FEDERAL ROLE IN BEHAVIOR MODIFICATION*, *supra* note 2, at 358-71. As the reinforcer frequently used in the tier program is the removal of unpleasant conditions, it may more aptly be termed a program of negative reinforcement. See Shah, *Basic Principles and Concepts*, in *CORRECTIONAL CLASSIFICATION AND TREATMENT* 123, 128 (1975).

27. Teodoro Ayllon and Nathan Arzin pioneered the token economy in the early 1960's on a ward of chronically psychotic patients in an Illinois State Hospital. T. AYLLON & N. ARZIN, *supra* note 24; see also A. KAZDIN, *supra* note 24; G. PAUL & R. LENTZ, *PSYCHOSOCIAL TREATMENT OF CHRONIC MENTAL PATIENTS: MILIEU VERSUS SOCIAL-LEARNING PROGRAMS* (1977); Atthowe & Krasner, *Preliminary Report on the Application of Contingent Reinforcement Procedures (Token Economy) on a "Chronic" Psychiatric Ward*, 73 J. ABNORMAL PSYCHOLOGY 37 (1968); Beck, *supra* note 2, at 506; Boudewyns, Fry & Nightingale, *Token Economy Programs in VA Medical Centers: Where Are They Today?*, 9 BEHAV. THERAPIST 126 (1986); Kazdin & Bootzin, *The Token Economy: An Evaluative Review*, 5 J. APPLIED BEHAV. ANALYSIS 343 (1972); Lloyd & Abel, *Performance on a Token Economy Psychiatric Ward: A Two-Year Summary*, 8 BEHAV. RES. & THERAPY 1 (1970); Winkler, *Management of Chronic Psychiatric Patients by a Token Reinforcement System*, 3 J. APPLIED BEHAV. ANALYSIS 47 (1970).

28. A survey conducted in the mid-1970's revealed that fourteen states utilized token economy systems in their prisons. See Blatte, *State Prisons and the Use of Behavior Control*, 4 HASTINGS CENTER REP. 11 (Sept. 1974). See also, e.g., M. MILAN, L. WOOD, R. WILLIAMS, J. ROGERS, L. HAMPTON & J. MCGEE, *APPLIED BEHAVIOR ANALYSIS AND THE IMPRISONED ADULT FELON PROJECT I: THE CELLBLOCK TOKEN ECONOMY* (1974); Geller, Johnson, Hamlin & Kennedy, *Behavior Modification in a Prison*, 4 CRIM. JUST. & BEHAV. 11 (1977); Milan & McKee, *The Cellblock Token Economy: Token Reinforcement Procedures in a Maximum Security Correctional Institution for Adult Male Felons*, 9 J. APPLIED BEHAV. ANALYSIS 253 (1976); Petrock & Walter, *Behavior Modification in Corrections: Implications for Organizational Change*, 1 NEW ENG. J. PRISON L. 203 (1975).

29. Achievement Place, a community-based residential treatment home established in 1967 in Lawrence, Kansas for court-remanded delinquent and pre-delinquent youths, uses a variety of behavior modification procedures, including a token economy, positive

retarded, hyperactive, and emotionally disturbed children.³⁰ Their use, which burgeoned in the 1970's, more recently has diminished somewhat.

In addition to the token economy and the tier system, other treatment techniques using positive reinforcement include shaping,³¹

reinforcement, and fines for inappropriate behavior. See Phillips, *Achievement Place: Token Reinforcement Procedures in a Home-Style Rehabilitation Setting for "Pre-Delinquent" Boys*, 1 J. APPLIED BEHAV. ANALYSIS 213 (1968); Phillips, Phillips, Fixsen & Wolf, *Achievement Place: Behavior Shaping Works for Delinquents*, PSYCHOLOGY TODAY 75 (June 1973); Phillips, Phillips, Fixsen & Wolf, *Achievement Place: Modification of the Behaviors of Pre-Delinquent Boys Within a Token Economy*, 4 J. APPLIED BEHAV. ANALYSIS 45 (1971). The Achievement Place Model for delinquency treatment has been copied widely, and many such homes are now in operation. NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 12; see also, e.g., Denkowski & Denkowski, *Community-Based Residential Treatment of the Mentally Retarded Adolescent Offender: Phase 1, Reduction of Aggressive Behavior*, 13 J. COMMUNITY PSYCHOLOGY 299 (1985); Liberman, Ferris, Salgado & Salgado, *Replication of the Achievement Place Model in California*, 8 J. APPLIED BEHAV. ANALYSIS 287 (1975). For a comprehensive handbook outlining the procedures used at Achievement Place, see E. PHILLIPS, E. PHILLIPS, D. FIXSEN & M. WOLF, *THE TEACHING FAMILY HANDBOOK* (1972).

The Federal Bureau of Prisons has utilized token economies in the treatment of delinquents at the National Training Center for Boys in Washington, D.C., and the Robert F. Kennedy Youth Center in Morgantown, West Virginia. See Carlson, *supra* note 26, at 158-59. For the description of a token economy system used in a California juvenile detention facility, see Gambrill, *The Use of Behavioral Methods in a Short-Term Detention Setting*, 3 CRIM. JUST. & BEHAV. 53 (1976); and Hobbs & Holt, *The Effects of Token Reinforcement on the Behavior of Delinquents in Cottage Settings*, 9 J. APPLIED BEHAV. ANALYSIS 189 (1976).

30. E.g., Birnbrauer, Wolf, Kidder & Tague, *Classroom Behavior of Retarded Pupils with Token Reinforcement*, 2 J. EXPERIMENTAL CHILD PSYCHOLOGY 219 (1965); Broden, Hall, Dunlap & Clark, *Effects of Teacher Attention and a Token Reinforcement System in a Junior High School Special Education Class*, 36 EXCEPTIONAL CHILDREN 341 (1970); Klotz, *Development of a Behavior Management Level System: A Comprehensive School-Wide Behavior Management Program for Emotionally Disturbed Adolescents*, 31 POINTER 5 (1987); O'Leary, Becker, Evans & Sandargas, *A Token Reinforcement Program in a Public School: A Replication and Systematic Analysis*, 2 J. APPLIED BEHAV. ANALYSIS 277 (1969); O'Leary & Drabman, *Token Reinforcement Programs in the Classroom*, 75 PSYCHOLOGICAL BULL. 379 (1971).

31. In shaping,

a desired behavior is broken down into successive steps that are taught one by one. Each of the steps is reinforced until it is mastered, and then the individual is moved to the next one. In this way, the new behavior is gradually learned as what the individual does becomes a closer and closer approximation of the behavioral goal.

NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 6; see also A. BANDURA, *supra* note 2, at 232-34; Sidman, *Operant Techniques*, in EXPERIMENTAL FOUNDATIONS OF CLINICAL PSYCHOLOGY 170, 173-74 (1962).

modeling,³² and contingency contracting.³³ The last of these—contingency contracting—is similar to the bet. In contingency contracting, the therapist and client, usually working within the client's natural environment, together choose the behavioral goals to be achieved and the reinforcement or aversive consequence that the client will receive upon their attainment or non-attainment. For example, a parent and child might agree that it would be desirable for the child to clean his room by putting away his toys in an appropriate place each evening. The child might want his parents to permit him to engage in a favorite activity. A contract of sorts is then entered into between the parent and child. The parent agrees to allow the child to engage in the favorite activity only after the child has put away his toys for a specified number of days; the child agrees that if the goal is not achieved, he will forego participation in the activity or suffer some other penalty. Thus, the contingency contract involves an exchange. Each party agrees both to change his own behavior and to provide reinforcement for the changes to be made by the other. Contingency contracting has been used in marriage counseling,³⁴ family therapy,³⁵ and the treat-

32. Modeling involves observational learning in which a person who already knows how to perform the behavior in question demonstrates it for an observer. See A. BANDURA, *supra* note 2, at 118-216; A. BANDURA, PSYCHOLOGICAL MODELING: CONFLICTING THEORIES (1971); A. BANDURA, *supra* note 12, at 47-105; NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 6; T. ROSENTHAL & B. ZIMMERMAN, SOCIAL LEARNING AND COGNITION (1978); Bandura, *Social Learning Through Imitation*, in NEBRASKA SYMPOSIUM ON MOTIVATION 211-69 (M. Jones ed. 1962); Bandura, *The Role of Imitation in Personality Development*, 18 J. NURSERY EDUC. 207 (1963); Zimmerman & Rosenthal, *Observational Learning of Rule Governed Behavior by Children*, 81 PSYCHOLOGICAL BULL. 29 (1974). For a social cognitive account of modeling, see A. BANDURA, *supra* note 12, at 72-78. Modeling increasingly is being used in treatment. See S. RACHMAN & R. HODGSON, OBSESSIONS AND COMPULSIONS (1980); RESEARCH IN THE SERVICE OF MENTAL HEALTH, *supra* note 4, at 328; Bandura, Jeffrey & Wright, *Efficacy of Participant Modeling Function of Response Induction Aids*, 83 J. ABNORMAL PSYCHOLOGY 56 (1974); Nathan, *supra* note 2, at 397. For a review of recent research on modeling with children, see Schunk, *Peer Models and Children's Behavioral Change*, 57 REV. EDUC. RES. 149 (1987).

33. See D. MEICHENBAUM & D. TURK, FACILITATING TREATMENT ADHERENCE 164-84 (1987); NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 6; D. O'BANION & D. WHALEY, BEHAVIORAL CONTRACTING: ARRANGING CONTINGENCIES OF REINFORCEMENT (1981); Brady, *supra* note 2, at 2149-50; Kirschenbaum & Flanery, *Toward a Psychology of Behavioral Contracting*, 4 CLINICAL PSYCHOLOGY REV. 597 (1984).

34. See, e.g., Brady, *supra* note 2, at 2149-50.

35. See, e.g., Stuart, *Behavioral Contracting Within the Families of Delinquents*, 2 J. BEHAV. THERAPY & EXPERIMENTAL PSYCHIATRY 1 (1971).

ment of obesity,³⁶ smoking,³⁷ alcoholism,³⁸ drug abuse,³⁹ and juvenile delinquency.⁴⁰ A recent application in the prison context is "contract parole."⁴¹

The other major category of behavior therapy implicated by the bet is aversion therapy. Based on both classical and operant conditioning, aversion therapy consists of "an attempt to associate an undesirable behavior pattern with unpleasant stimulation or [to] make the unpleasant stimulation a consequence of the undesirable behavior."⁴² By applying negative consequences on the occurrence of inappropriate or maladaptive behavior, aversion therapy seeks to establish a connection between the target behavior and the unpleasant consequence to induce avoidance or suppression of the target behavior. Aversive consequences used have ranged from frowning, disapproval, criticism, and scolding, to removal of privileges, total withholding of reinforcement, social isolation ("time out"), fines, over-correction, slapping, high-intensity auditory signals, lemon juice squirted into the mouth,

36. See, e.g., Fremouw, Callahan, Zitter & Katell, *Stimulus Control and Contingency Contracting for Behavior Change and Weight Loss*, 6 ADDICTIVE BEHAV. 289 (1981); Mann, *The Behavior-Therapeutic Use of Contingency Contracting to Control an Adult Behavior Problem: Weight Control*, 5 J. APPLIED BEHAV. ANALYSIS 99 (1972); Romanczyk, Tracey, Wilson & Thorpe, *Behavioral Techniques in the Treatment of Obesity: A Comparative Analysis*, 11 BEHAV. RES. & THERAPY 629 (1973); Stuart, *Behavioral Control of Overeating*, 5 BEHAV. RES. & THERAPY 357 (1967).

37. See, e.g., Tighe & Elliott, *A Technique for Controlling Behavior in Natural Life Settings*, 1 J. APPLIED BEHAV. ANALYSIS 263 (1968); Tooley & Pratt, *An Experimental Procedure for the Extinction of Smoking Behavior*, 17 PSYCHOLOGICAL REC. 209 (1967).

38. See, e.g., Miller, *The Use of Behavioral Contracting in the Treatment of Alcoholism*, 3 BEHAV. THERAPY 593 (1972); Miller, Hersen & Eisler, *Relative Effectiveness of Instructions, Agreements and Reinforcement in Behavioral Contracts with Alcoholics*, 83 J. ABNORM. PSYCHOLOGY 548 (1974).

39. See, e.g., Beatty, *Contingency Contracting with Heroin Addicts*, 13 INT'L J. ADDICTIONS 509 (1978); Boudin, *Contingency Contracting as a Therapeutic Tool in the Deceleration of Amphetamine Use*, 3 BEHAV. THERAPY 604 (1972); Dolan, Black, Penk, Robinowitz & DeFord, *Predicting the Outcome of Contingency Contracting for Drug Abuse*, 17 BEHAV. THERAPY 470 (1986); Magura, Casriel, Goldsmith, Strug & Lipton, *Contingency Contracting with Polydrug-Abusing Methadone Patients*, 13 ADDICTIVE BEHAV. 113 (1988).

40. See, e.g., Alexander & Parsons, *Short-Term Behavioral Intervention with Delinquent Families*, 81 J. ABNORM. PSYCHOLOGY 219 (1973); Stuart, *supra* note 35; Weathers & Liberman, *Contingency Contracting with Families of Delinquent Adolescents*, 6 BEHAV. THERAPY 356 (1975).

41. Finckenaue & Rauh, *Contract Parole: Some Legal and Rehabilitative Issues of Mutual Agreement Programing for Parole Release*, 5 CAP. U.L. REV. 175 (1976).

42. S. RACHMAN & J. TEASDALE, *AVERSION THERAPY AND BEHAVIOR DISORDERS* xii (1969). For the distinction between aversive control, an operant term, and aversive conditioning, a classical term, see Goldiamond, *supra* note 2, at 110 n.20. Although the penalty provided in the wager discussed here is a mode of operant conditioning, making the term "aversive control" the correct one, I find this term somewhat misleading. Because "aversive control" is a form of conditioning, I will use the term "aversive conditioning" interchangeably with "aversive control" and "aversion therapy."

low-level electric shock, emetic drugs, and drugs inducing respiratory paralysis.⁴³ Aversive methods have been used in the treatment of alcoholism, drug addiction, excessive smoking, compulsive eating, sexual deviation, compulsive shoplifting, and such self-injurious behavior in autistic children as head-banging, tongue-biting, and rumination. They also have been used to alter disruptive and anti-social behavior in school children, mental patients, the mentally retarded, and prisoners.⁴⁴

These two techniques of behavior therapy—positive reinforcement and aversive conditioning—are rooted in the basic behavioral paradigm developed by Watson, Thorndike, and Skinner. Under the traditional view, all behavior, even complex behavior, is a function of its consequences and can be explained exclusively in terms of stimulus and response. All behavior, in this view, is shaped by the environmental stimuli that follow it in a more or less mechanical fashion; indeed, a strict Skinnerian would regard it as unnecessary and misleading to consider the role of the “will” or the “mind” in explaining how organisms learn.⁴⁵ However, this mechanical and deterministic

43. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 6-8; S. RACHMAN & J. TEASDALE, *supra* note 42, at 8-13.

44. See generally A. BANDURA, *supra* note 2, at 501-63; NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 6-8; S. RACHMAN & J. TEASDALE, *supra* note 42; Ayllon, *supra* note 3, at 7-8; Bucher & Lovaas, *Use of Aversive Stimulation in Behavior Modification*, in MIAMI SYMPOSIUM ON THE PREDICTION OF BEHAVIOR, 1967: AVERSIVE STIMULATION 77-145 (M. Jones ed. 1968); Schwitzgebel, *Limitations on the Coercive Treatment of Offenders*, 8 CRIM. L. BULL. 267, 277-87 (1972). For clinical applications, see, e.g., Azrin & Wesolowski, *Theft Reversal: An Overcorrection Procedure for Eliminating Stealing by Retarded Persons*, 7 J. APPLIED BEHAV. ANALYSIS 577 (1974); Barber & Winefield, *The Influence of Stimulus Intensity and Motivational Differences on Learned Helplessness Deficits*, 8 PERS. & INDIVID. DIFFERENCES 25 (1987); Blatte, *supra* note 28, at 11 (reporting the use of aversion therapy in seven state prison systems); Feingold, *An Automated Technique for Aversive Conditioning in Sexual Deviations*, in PSYCHOTECHNOLOGY: ELECTRONIC CONTROL OF MIND AND BEHAVIOR 123 (1973); Foreyt & Kennedy, *Treatment of Overweight by Aversion Therapy*, 9 BEHAV. RES. & THERAPY 29 (1971); Hallam & Rachman, *Some Effects of Aversion Therapy on Patients with Sexual Disorders*, 10 BEHAV. RES. & THERAPY 171 (1972); Holzinger, Mortimer & Van Dusen, *Aversive Conditioning Treatment of Alcoholism*, 124 AM. J. PSYCHIATRY 450 (1967); Kellam, *Shoplifting Treated by Aversion to a Film*, 7 BEHAV. RES. & THERAPY 125 (1969); Lovaas, Schaeffer & Simmons, *Building Social Behavior in Autistic Children by Use of Electric Shock*, 1 J. EXPERIMENTAL RES. PERSONALITY 99 (1965); Lovibond, *Aversion Therapy for Heroin Dependence*, 2 LANCET 382 (1968); Marks & Gelder, *Transvestism and Fetishism: Clinical and Psychological Changes During Faradic Aversion*, 119 BRIT. J. PSYCHIATRY 711 (1967); Tyler & Brown, *The Use of Swift, Brief Isolation as a Group Control Device for Institutionalized Delinquents*, 5 BEHAV. RES. & THERAPY 1 (1967); and Wallace, Burger, Neal, Brero & Davis, *Aversive Conditioning Use in Public Facilities for the Mentally Retarded*, 14 MENTAL RETARDATION 17 (1976) (aversive conditioning used in 45% of public residential facilities for the mentally retarded responding to a survey).

45. See, e.g., B.F. SKINNER, ABOUT BEHAVIORISM 53-62, 152-70 (1974); B.F. SKINNER, BEYOND FREEDOM AND DIGNITY 184-86 (1971); B.F. SKINNER, SCIENCE AND HUMAN

view of behavior is oversimplified and artificial. Surely more than mechanical responses to external stimuli seem to be involved when we engage in such diverse activities as learning arithmetic or psychology, or how to ski, play poker, bake a cake, or build a bookcase.

B. *The Wager as an Application of Principles of Cognitive and Social Psychology*

Cognitive and perceptual processes play an undeniable role in virtually all of human learning. The traditional behavioral model of learning accordingly has been challenged by what has come to be known as cognitive psychology. According to cognitive theory, learning often involves cognitive or intellectual processes that cannot be accounted for within the traditional behavioral paradigm.⁴⁶ The work

BEHAVIOR 87-90, 110-16, 228-29 (1953); Ferster, *supra* note 16, at 107 (Watson regarded thinking as the product of muscle activity). Although behaviorists do not deny the existence of mental events, for example, the imagining of feared stimuli in systematic desensitization, traditional behaviorists reject the notion that mental events cause behavior. See Ledwidge, *Cognitive Behavior Modification: A Step in the Wrong Direction?*, 85 PSYCHOLOGICAL BULL. 353 (1978) (claiming that the study of mental events would threaten behaviorism's empirical methods).

46. See A. BANDURA, *supra* note 12, at 12-13, 115-22; H. GLEITMAN, *supra* note 10, at 90-101; Breger & McGaugh, *Critique and Reformulation of "Learning Theory" Approaches to Psychotherapy and Neurosis*, 63 PSYCHOLOGICAL BULL. 338 (1965).

of Wolfgang Kohler,⁴⁷ Edward Tolman,⁴⁸ Harry Harlow,⁴⁹ and other

47. See W. KOHLER, *THE MENTALITY OF APES* (1925). Kohler devised an experiment in which he placed chimpanzees in an enclosed play area. Kohler then placed fruit, usually bananas, beyond the chimpanzees' reach, requiring them to use some nearby object as a tool to obtain the fruit. *Id.* at 32-68. The chimpanzees learned to use sticks as rakes to haul in bananas that were on the ground outside of the cage, and to club down fruit hung overhead and beyond their grasp. *Id.* Some chimpanzees learned to use the sticks as poles that they would climb to retrieve the fruit before the sticks toppled over. *Id.* at 71-73. They also used boxes as footstools and make-shift ladders. They eventually became builders, piling boxes on top of one another to erect platforms from which they could jump to reach the fruit. *Id.* at 139-78. Sometimes the chimpanzees became toolmakers, breaking off branches from nearby trees to use as sticks. One of the chimpanzees (the famous Sultan) learned to attach two bamboo sticks together in order to create a rake long enough to reach fruit that was particularly far away. *Id.* at 136-37.

To Kohler, the chimpanzees' behavior could not be explained merely in simple stimulus-response terms. Rather, Kohler posited that the chimpanzees had behaved as if they had obtained some insight into the problem and how to solve it. *Id.* at 276-77. Often the insightful solution followed a period in which the chimpanzee paused, only moving its head and eyes as if studying the situation. Once the problem was solved, the chimpanzees abandoned their past unsuccessful strategies in favor of the new solution, which was then applied continuously thereafter without the repetition of past errors. *Id.* at 179-234.

Kohler also demonstrated that the chimpanzees could transfer their new insights from the original task to solve a new problem. For example, he selected chimpanzees that previously had learned to use boxes as a platform to reach highly hung fruit. These chimpanzees again were presented with highly hung fruit, but all boxes had been removed from the enclosure. *Id.* at 48-49. They quickly found other objects, such as a table, which they dragged to place under the fruit, and used them, as they previously had used the boxes, as a platform from which to jump to retrieve the fruit. *Id.* In one case, the indomitable Sultan approached Kohler, pulled him by the arm until he was under the fruit, and climbed upon him to reach the bananas. *Id.* at 50. According to Kohler, the chimpanzees had acquired a new set of internal "representations" of the situation based on knowledge of relationships and expectations concerning the consequences of various actions. They reorganized their perceptions of the situation and acquired general insights that could be adapted and transferred to other situations. *Id.* at 179-234.

48. See E. TOLMAN, *PURPOSIVE BEHAVIOR IN ANIMALS AND MEN* (1932); Tolman, *A Cognitive Motivation Theory*, in *THEORIES OF MOTIVATION IN LEARNING* 61 (1964); Tolman, *Cognitive Maps in Rats and Men*, 55 *PSYCHOLOGICAL REV.* 189 (1948); Tolman & Honzik, *Introduction and Removal of Reward, and Maze Performance in Rats*, 4 *U. CAL. PUBLICATIONS PSYCHOLOGY* 257 (1930). Tolman described instrumental learning as the acquisition of bits of knowledge or cognitions that are organized for future use. He demonstrated that animals can learn about the performance of a task without even doing it. Rats were run through a maze without reinforcement for a period of ten days. When he finally placed food in the goal box at the end of the maze, a rapid decline in errors followed. The rats had acquired some knowledge concerning the maze during their prior unreinforced trials, and they later demonstrated this latent learning when Tolman introduced the rewards. Tolman & Honzik, *supra*, at 257. In Tolman's arresting metaphor, animals acquire a variety of "cognitive maps" that subsequently are used in framing their behavioral responses. Tolman, *Cognitive Maps in Rats and Men*, *supra*, at 193; see also E. TOLMAN, *supra*, at 12 ("cognitive determinants"). Tolman posited that the rats' expectancies concerning what they would find in the goal box were a major determinant of their behavior, and that learning generally consisted of the development of expectations that behavior will produce certain outcomes, which led to general strategies of response. E. TOLMAN, *supra*, at 364.

49. See Harlow, *Learning Set and Error Factor Theory*, in 2 *PSYCHOLOGY: A STUDY OF A SCIENCE* 492 (S. Koch ed. 1959); Harlow, *The Formation of Learning Sets*, 56 *PSYCHOLOGY*

cognitivists, challenged the model of radical behaviorism by demonstrating that such mental processes as insight, problem solving strategies, latent learning, expectancies, "learning sets," "cognitive maps," and "cognitive structures" play an important role in learning.⁵⁰ These cognitive processes bridge the gap between stimulus and response and cannot be ignored in any satisfactory explanation of learning and behavior.

These insights of cognitive psychology have led to a paradigm

REV. 51 (1949). Harlow demonstrated that rhesus monkeys employed a form of abstract reasoning in solving a series of discrimination problems that he had developed for them. Although the monkeys were slow at first, their performances improved over time, and after several hundred discrimination problems, they solved each one efficiently. Harlow posited that the monkeys had acquired a "learning set," a problem solving strategy that they were able to apply to each new discrimination problem. They developed generalized approaches to the tasks based on conceptual relationships, not merely perceptual ones.

50. Cognitive psychology can be placed within the broader framework of the emerging field of cognitive science, which brings together knowledge of the mind and mental processes drawn from a number of academic disciplines—linguistics, anthropology, philosophy, and computer sciences, as well as psychology. See G. LAKOFF, *WOMEN, FIRE, AND DANGEROUS THINGS: WHAT CATEGORIES REVEAL ABOUT THE MIND* xi (1987); N. STILLINGS, M. FEINSTEIN, J. GARFIELD, E. RISSLAND, D. ROSENBAUM, S. WEISLER & L. BAKER-WARD, *COGNITIVE SCIENCE: AN INTRODUCTION* (1987). This work has revealed much about the role of such cognitive devices as conceptual categories, family resemblances, prototypes, scripts, folk theories, idealized cognitive models, analogies, metaphors, metonymic models, and strategies of inference in human reasoning and behavior. See generally *COGNITION AND CATEGORIZATION* (E. Rosch & B. Lloyd eds. 1978); *COGNITION AND SOCIAL BEHAVIOR* (J. Carroll & J. Payne eds. 1976); M. JOHNSON, *THE BODY IN THE MIND: THE BODILY BASIS OF MEANING, IMAGINATION, AND REASON* (1987); *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES* (D. Kahneman, P. Slovik & A. Tversky eds. 1982); G. LAKOFF, *supra*; G. LAKOFF & M. JOHNSON, *METAPHORS WE LIVE BY* (1980); R. NISBETT & L. ROSS, *HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT* (1980); R. SCHANK & R. ABELSON, *SCRIPTS, PLANS, GOALS, AND UNDERSTANDING* (1977); L. WITTGENSTEIN, *TRACTATUS LOGICO-PHILOSOPHICUS* (1922); Brown, *How Shall a Thing Be Called?*, 65 *PSYCHOLOGICAL REV.* 14 (1958); Rosch, *Cognitive Representations of Semantic Categories*, 104 *J. EXPERIMENTAL PSYCHOLOGY: GENERAL* 192 (1975); Rosch, *Natural Categories*, 4 *COGNITIVE PSYCHOLOGY* 328 (1973). For scholarship in law and cognitive theory, see, e.g., Edwards & von Winterfeldt, *Cognitive Illusions and Their Implications for the Law*, 59 *CAL. L. REV.* 225 (1986); Lawrence, *The Id, the Ego, and Equal Protection*, 39 *STAN. L. REV.* 317 (1987); Minow, *Foreword: Justice Engendered*, 101 *HARV. L. REV.* 10 (1987); Perlin, *Psychodynamics and the Insanity Defense: "Ordinary Common Sense" and Heuristic Reasoning*, 69 *NEB. L. REV.* 3 (1990); Saks & Kidd, *Human Information Processing and Adjudication: Trial by Heuristics*, 15 *LAW & SOC. REV.* 123 (1980-1981); Wexler & Schopp, *How and When to Correct for Juror Hindsight Bias in Mental Health Malpractice Litigation: Some Preliminary Observations*, 7 *BEHAV. SCI. & L.* 485 (1989); Winick, *Competency to Consent to Treatment: The Distinction Between Assent and Objection*, 28 *HOUS. L. REV.* 15 (1991) [hereinafter *Competency*]; Winick, *The Right to Refuse Treatment: A First Amendment Perspective*, 44 *U. MIAMI L. REV.* 1 (1989) [hereinafter *Right to Refuse*]; Winter, *The Metaphor of Standing and the Problem of Self-Governance*, 40 *STAN. L. REV.* 1371 (1988); and Winter, *Transcendental Nonsense, Metaphoric Reasoning and the Cognitive Stakes for Law*, 137 *U. PA. L. REV.* 1135 (1989).

shift, a reconceptualization of the basic behavioral model.⁵¹ Behavior is no longer thought of as being reflexively or mechanically conditioned by environmental stimuli.⁵² Rather than automatically strengthening behavior without the conscious involvement of the individual, reinforcement functions as an "informative and motivational influence[]." ⁵³ Conditioning, in short, is "cognitively mediated."⁵⁴ Internal cognitive processes determine how an individual experiences reinforcement—how he attends to, processes, and remembers it—and ultimately, how it affects present and future conduct. By experiencing reinforcement, individuals learn the instrumental or functional value of their behavior, *i.e.*, they learn to predict and to expect certain things to happen if they behave in certain ways.⁵⁵ Reinforcers thus impart information, which serves as a guide for action.⁵⁶ "Contrary to the mechanistic metaphors" of traditional behaviorism, "outcomes change behavior in humans through the intervening influence of thought."⁵⁷ Consequences or reinforcers influence action as a result of their incentive value to the individual.⁵⁸ After an individual has recognized the instrumental relation between his actions and anticipated benefits or detriments, contingent reinforcers may produce behavior depending upon how he values the incentive or disincentive and the behavior itself.⁵⁹ The individual, under this account, is viewed "as a gatherer, processor, and user of information rather than

51. See A. BANDURA, *supra* note 12, at 12-15; H. GLEITMAN, *supra* note 10, at 90-101; Bandura, *Behavior Theory and the Models of Man*, 29 AM. PSYCHOLOGIST 859 (1974); Boneau, *Paradigm Regained? Cognitive Behaviorism Restated*, 29 AM. PSYCHOLOGIST 297 (1974); Mahoney, *The Cognitive Sciences and Psychotherapy: Patterns in a Developing Relationship*, in HANDBOOK OF COGNITIVE-BEHAVIORAL THERAPIES 357-60 (K. Dobson ed. 1988).

52. A. BANDURA, *supra* note 12, at 13; Bandura, *supra* note 51, at 859 ("Contrary to popular belief, the fabled reflexive conditioning in humans is largely a myth.").

53. A. BANDURA, *supra* note 12, at 122; Bandura, *supra* note 51, at 860; see also H. GLEITMAN, *supra* note 10, at 96.

54. Bandura, *supra* note 51, at 859; see also A. BANDURA, *supra* note 12, at 13 ("thoughts mediate the effects of outcomes"; outcomes are "cognitively processed").

55. See A. BANDURA, *supra* note 12, at 13, 412-13; H. GLEITMAN, *supra* note 10, at 96; B. ROTTER, *SOCIAL LEARNING AND CLINICAL PSYCHOLOGY* (1954); Bandura, *supra* note 51, at 859-60.

56. Bandura, *supra* note 51, at 860; see also A. BANDURA, *supra* note 12, at 122 (It is "more fitting to speak of *guidance* of behavior by anticipated incentives than *reinforcement* of behavior by reinforcers.").

57. Bandura, *supra* note 51, at 860.

58. *Id.*

59. See H. GLEITMAN, *supra* note 10, at 96; B. ROTTER, *supra* note 55; Bandura, *supra* note 51, at 860. This account is similar to that developed by a branch of organizational psychology known as "instrumentality theory." See, e.g., F. LANDY & D. TRUMBO, *PSYCHOLOGY OF WORK BEHAVIOR* 293-333 (1976); V. VROOM, *WORK AND MOTIVATION* (1964); Galbraith & Cummings, *An Empirical Investigation of the Motivational Determinants of Task Performance: Interactive Effects Between Instrumentality-Valence and Motivation-*

as a simple reactor to external carrots, whips, and the stimuli associated with them."⁶⁰

What emerges is a reconceptualization of behavioral theory that does not reject the basic insights of classical and operant conditioning, but builds upon them, recasting them to add the essential cognitive dimension that the traditional theories had overlooked. The techniques of behavior therapy discussed above, based on principles of positive reinforcement and aversive conditioning, can best be analyzed within the framework of this emerging reconceptualization of behaviorism. Rather than viewing these techniques exclusively within the narrow stimulus-response paradigm of traditional behaviorism, their functioning can be better understood by using the newer insights of cognitive behaviorism.⁶¹ Cognitive psychology thus helps to explain why many of the techniques of behavior therapy have been so effective, and is especially useful in understanding the psychological power of the bet.

Let us examine the bet in light of these insights. As can be seen, the bet combines principles of both positive reinforcement and aver-

Ability, 2 ORGANIZATIONAL BEHAV. & HUM. PERFORMANCE 237 (1967); Peak, *Attitude and Motivation*, in NEBRASKA SYMPOSIUM ON MOTIVATION 149 (M. Jones ed. 1955).

60. Boneau, *supra* note 51, at 308; *see also* A. BANDURA, *supra* note 12, at 13:

[M]ost external influences operate through cognitive processing. During transactions with their environment, people are not merely emitting responses and experiencing outcomes. They form beliefs from observed regularities about the outcomes likely to result from actions in given situations and regulate their behavior accordingly. Contrary to claims that behavior is controlled by its immediate consequences, behavior is related to its outcomes at the level of aggregate consequences, rather than immediate effects. . . . Response consequences convey probabilistic information for forming expectancies about how outcomes relate to actions, rather than stamp in responses.

61. *See generally* A. BANDURA, *supra* note 12; A. BECK, COGNITIVE THERAPY AND THE EMOTIONAL DISORDERS (1976); A. BECK & G. EMERY, ANXIETY AND PHOBIAS: A COGNITIVE PERSPECTIVE (1985); COGNITIVE-BEHAVIORAL INTERVENTIONS: THEORY, RESEARCH, AND PROCEDURES (P. Kendall & S. Hollon eds. 1979); HANDBOOK OF COGNITIVE-BEHAVIORAL THERAPIES (K. Dobson ed. 1988); A. LAZARUS, BEHAVIOR THERAPY AND BEYOND (1971); M. MAHONEY, COGNITION AND BEHAVIOR MODIFICATION (1974); D. MEICHENBAUM, COGNITIVE BEHAVIOR MODIFICATION: AN INTEGRATIVE APPROACH (1977); C. THORESEN & M. MAHONEY, BEHAVIORAL SELF-CONTROL (1974); D. TURK, D. MEICHENBAUM & M. GENEST, PAIN AND BEHAVIORAL MEDICINE: A COGNITIVE BEHAVIORAL PERSPECTIVE (1983); Beck, *Cognitive Therapy: Nature and Relation to Behavior Therapy*, 1 BEHAV. THERAPY 184 (1970); Boneau, *supra* note 51; Dember, *Motivation and the Cognitive Revolution*, 29 AM. PSYCHOLOGIST 161 (1974); Ingram & Scott, *Cognitive Behavior Therapy*, in INTERNATIONAL HANDBOOK, *supra* note 2, at 53; Kendall, *Cognitive Processes and Procedures in Behavior Therapy*, in REVIEW OF BEHAVIOR THERAPY: THEORY AND PRACTICE 114 (11th ed. 1987); Meichenbaum & Cameron, *Cognitive-Behavior Therapy*, in CONTEMPORARY BEHAVIOR THERAPY, *supra* note 2, at 310. A journal devoted to the field, COGNITIVE THERAPY AND RESEARCH, was founded in 1977 with Michael Mahoney, a leading proponent, as editor.

sive conditioning. The reinforcement involved in the bet is usually the generalized reinforcer of the money that will be received upon completion of the goal that is the subject of the wager. The negative or aversive consequence is usually the money that the bettor will lose if the goal is not achieved—not merely the failure to realize the profit of winning, but the loss of the amount he is required to deposit in order to enter into the bet. In this respect, the bet is a very close relative of a type of contingency contracting in which the contract provides for a positive reinforcer upon completion of the goal, but requires application of an aversive consequence or penalty should the goal not be reached.⁶² Moreover, as with contingency contracting, the reinforcer and aversive consequence used in the bet need not be limited to money. Indeed, creative selection of reinforcers can result in much more potent motivators than money. Behavior therapists often select reinforcers pursuant to what is known as the “Premack Principle,”⁶³ under which the incentive preferences of the particular patient as revealed by his natural behavior are relied on in tailoring the therapeutic program to the individual whose behavior is sought to be changed.⁶⁴ Thus, a patient electing contingency contracting to deal with a problem of obesity might agree to engage in a favorite activity, say, watching Monday night football or going to the movies, only if he accomplishes a specified weight loss in a particular time period, and to deposit with his therapist a post-dated check for twenty-five dollars made payable to an organization he despises, say, the American Nazi Party, that the therapist will mail to the organization if he fails to meet the goal. Given the individual’s preferences, the reward of the football game or movie, or the sanction of the American Nazi Party donation, will generate greater motivation for him to achieve the goal than will obtaining or forfeiting a specified sum of money, perhaps even if it were several hundred dollars. Tailoring the stakes in the bet to the individual’s incentive preferences can have similarly beneficial effects. A ticket to a particular sporting event or rock con-

62. See *supra* notes 33-41 and accompanying text.

63. See Premack, *supra* note 23.

64. For discussions of creative reinforcement procedures, see D. MEICHENBAUM & D. TURK, *supra* note 33, at 176-84; and Brady, *supra* note 2, at 2149; see also, e.g., Romanczyk, Tracey, Wilson & Thorpe, *supra* note 36, at 630 (client’s deposit in treatment program for obesity made refundable contingent on attendance at treatment sessions); Hinds, *Cutting the Dropout Rate: High Goal But Low Hopes*, N.Y. Times, Feb. 17, 1990, at 1, col. 1 (use by school systems to decrease the school dropout rate of creative positive reinforcers, such as pizza parties, summer jobs, and drawings for used cars, and of creative aversive conditioners such as revocation of driver’s license); *infra* note 126 (discussing the use of creative reinforcers in contingency contracting programs to treat drug addiction); *infra* note 168 (discussing creative use of non-monetary aversive consequences).

cert might inspire superhuman efforts by a student in meeting particular goals—like improving school attendance or academic performance—as opposed to a reward of fifty dollars. Conversely, loss of the opportunity to attend a school basketball game or dance might be a much more effective sanction for him than the loss of fifty dollars.

Perhaps for some behavior patterns that are difficult to master, or bad habits that are difficult to break, the bet can be structured to provide partial rewards or sanctions, or points or tokens (later redeemable when enough have been accumulated) periodically as intermediate targets⁶⁵ are either achieved or missed, measured at intervals that occur frequently, thereby facilitating the progressive shaping of behavior.⁶⁶ Indeed, structuring the bet to allow for such periodic rewards or sanctions would probably always be desirable since the learning of adaptive behavior and the extinction of maladaptive behavior will more likely occur if the interval between such target behavior and the provision of the reinforcer or aversive consequence is brief.⁶⁷ This is especially true for people with a diminished ability to defer gratification.⁶⁸ For people with middle-class values or backgrounds, who may have a strong ability to delay gratification,⁶⁹ the promise of a reward in the future may be sufficient to motivate present behavior. Thus, middle-class students will work hard to achieve future reinforcement in the form of good grades provided at the end of a semester and increased educational and occupational opportunities that may come many years later. Others, however, including many of the disadvantaged whose social or health problems government is most interested in solving, often are more present-oriented, valuing present utility and heavily discounting the future. For them,

65. Providing intermediate targets, or subgoals, will best maintain self-motivation over the period of performance of the ultimate goal. A. BANDURA, *supra* note 12, at 474-76. "Subgoals provide present guides and inducements for action, while subgoal attainments produce the efficacy, information and self-satisfactions that sustain one's efforts along the way. Persistence that leads to eventual mastery of an activity is thus ensured through a progression of subgoals, each with a high probability of success." *Id.* at 475.

66. *See supra* note 31.

67. *See* H. GLEITMAN, *supra* note 10, at 83; Perin, *A Quantitative Investigation of the Delay of Reinforcement Gradient*, 32 J. EXPERIMENTAL PSYCHOLOGY 37 (1943). *But see* A. BANDURA, *supra* note 12, at 15-16 (questioning the principle of immediacy of reinforcement, and suggesting that individuals respond to reinforcers by cognitively integrating the timing and frequency of reinforcement).

68. *See* Schneider & Lysgaard, *The Deferred Gratification Pattern: A Preliminary Study*, 18 AM. SOC. REV. 142 (1953).

69. The received wisdom that ability to defer gratification is class-based may not withstand empirical examination. The inability to defer gratification may be pervasive in our society, brought about by peer pressures and societal conditioning at all class levels. The question deserves empirical investigation.

the concept of future benefits may have little meaning and may not effectively influence behavior.

The traditional bet—with payoff or payout occurring at the conclusion of a perhaps lengthy time period that marks the occurrence or nonoccurrence of a particular contingency—may thus need restructuring to be successfully adapted for governmental use in the areas discussed here. Periodic provision of rewards or sanctions (or points that accumulate toward such rewards or sanctions) as intermediate goals are met or missed may function more effectively. Another alternative would be rewards or sanctions (or points) provided at variable, but non-predictable, intervals following attainment or nonattainment of an intermediate goal. Indeed, such variable rate reinforcement, the principle upon which the slot machine is based, can serve as a powerful influencer of behavior.⁷⁰

Aside from how the bet is structured, some people will be motivated to succeed simply because they like game playing, especially game playing where they have a stake in the outcome and a reasonable prospect of winning. Games are fun, at least for many people, and there often is a real pleasure in the competition and thrill in the victory. People like to win, especially when their victory is a public one; few like to lose a game, especially when their loss is public.

In addition to combining the two basic applications of learning theory—positive reinforcement and aversive conditioning—to facilitate achievement of the goal, the bet provides a seductive motivator that can function to induce people to commit themselves to the accomplishment of a desirable goal who otherwise might not do so. Many people know they should change their behavior patterns in certain respects, discontinuing a bad habit, for example, or initiating a course of conduct that they have been contemplating. Although they have reached this cognitive awareness, however, they prefer to defer action until tomorrow, or next week, or next year. But tomorrow never quite comes. If confronted, they frequently will affirm their willingness to accomplish the goal in question, but for a variety of reasons (or just because they aren't quite ready to start) temporizing

70. See H. GLEITMAN, *supra* note 10, at 86-88 (variable rate reinforcement schedules are more effective than fixed rate schedules); Lewis & Duncan, *Effect of Different Percentages of Money Reward on Extinction of a Lever-Pulling Response*, 52 J. EXPERIMENTAL PSYCHOLOGY 23 (1956) (less frequent provision of reinforcement produces behavior that is less subject to extinction than that produced by more frequent reinforcement); Yuki, Wexley & Seymore, *Effectiveness of Pay Incentives Under Variable Ratio and Continuous Reinforcement Schedules*, 56 J. APPLIED PSYCHOLOGY 19, 22 (1972) (variable rate reinforcement schedules are more effective than continuous rate schedules). Indeed, the *schedule* of reinforcement may have a greater effect on response rate than the nature or size of the reinforcer. See generally C. FERSTER & B.F. SKINNER, SCHEDULES OF REINFORCEMENT (1957).

seems attractive. Some of these individuals might find the bet to be an attractive spark to action, a needed inducement to get them moving. An offer to bet, of course, will not convince people to do what they do not wish to do. But for those who are flirting with the idea of undertaking the achievement of a particular goal, or even for those who haven't considered the goal, but who wish to obtain the monetary (or non-monetary) reinforcer that comes with its achievement, the offer to bet can have a powerful effect. Indeed, I suggest that if properly employed, an offer by government to wager with its citizens about the outcome of contingencies within their control can have a far more powerful effect than when the government merely challenges them to behave in a particular way, or exhorts them to do so, or even when it threatens them with sanctions for non-compliance.

The threat of sanctions often will fail effectively to bring about behavior change when sanctions are rarely or randomly imposed.⁷¹ Indeed, the credibility of the threat is seriously diminished when the level of detection is as low as finite enforcement resources will inevitably dictate. The criminal sanction and the civil fine are good examples; they simply have not effectively deterred many kinds of socially harmful behavior. For example, the threat of sanctions has not succeeded in effectively changing the behavior of drug abusers, intoxicated drivers, or environmental polluters. In frustration, the public demands harsher penalties, but without a reasonable degree of certainty in their application, the threat of even severe sanctions will have little effect if the environment continues to reward the behavior that is sought to be deterred.⁷²

71. See A. BANDURA, *supra* note 12, at 273, 278, 281; J. GIBB, CRIME, PUNISHMENT AND DETERRENCE 60, 105-10 (1975); R. POSNER, *supra* note 15, at 164-65; Andeneas, *The General Preventive Effects of Punishment*, 114 U. PA. L. REV. 949, 960-70 (1966); Antunes & Hunt, *The Impact of Certainty and Severity of Punishment on Levels of Crime in American States*, 64 J. CRIM. L. & CRIMINOLOGY 486, 492-93 (1973); Erickson, Gibbs & Jensen, *The Deterrence Doctrine and the Perceived Certainty of Legal Punishments*, 42 AM. SOC. REV. 305 (1977); Nagel, *Trade Offs in Crime Reduction Among Certainty, Severity, and Crime Benefits*, 35 RUTGERS L. REV. 100, 108-14 (1982); Tittle & Rowe, *Certainty of Arrest and Crime Rates: A Further Test of the Deterrence Hypothesis*, 52 SOC. FORCES 455 (1974). For extensive treatments of deterrence theory, see, e.g., G. BECKER & W. LANDES, *ESSAYS ON THE ECONOMICS OF CRIME AND PUNISHMENT* (1974); DETERRENCE AND INCAPACITATION: ESTIMATING THE EFFECTS OF CRIMINAL SANCTIONS ON CRIME RATES (A. Blumstein, J. Cohen & D. Nagin eds. 1978); M. SILVER, *PUNISHMENT, DETERRENCE AND POLICE EFFECTIVENESS: A SURVEY AND CRITICAL INTERPRETATION OF THE RECENT ECONOMETRIC LITERATURE* (1974); C. TITTLE, *SANCTIONS AND SOCIAL DEVIANCE: THE QUESTION OF DETERRENCE* (1980); and F. ZIMRING & G. HAWKINS, *DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL* (1973).

72. See, e.g., A. BANDURA, *supra* note 12, at 279; J. WILSON & J. HERRNSTEIN, *CRIME AND HUMAN NATURE* 398, 401 (1985); Antunes & Hunt, *supra* note 71, at 492-93. I do not suggest that the criminal sanction, because of the uncertainty of its application, has no

With the bet, on the other hand, there is certainty: The individual will either behave in the targeted way and collect an agreed-upon reward, or fail to do so and suffer an agreed-upon sanction. The exact amount or nature of the reward and sanction are known in advance, and one or the other will occur with certainty within a specified period of time. The rules of the game are known by the players and accepted by them in advance; indeed, those opting to participate have a strong incentive to master the rules. Target behaviors are objectified, measurable, and well understood by all, as are the means of determining winners and losers.

The setting of explicit goals is itself a significant factor in their achievement.⁷³ This "goal-setting effect," "one of the most robust findings in the psychological literature,"⁷⁴ helps to explain why people function differently with regard to successful completion of performance when they have bet that they will perform in a certain way than when they have not. The conscious setting of a goal is virtually indispensable to its achievement.⁷⁵ Moreover, by entering into a wager, the individual is predicting that he can achieve the goal and that he will do so, thereby setting up expectancies that help to insure success.⁷⁶ Goals enhance motivation and increase effort through self-

deterrent effect. I merely suggest that, in the case of at least some socially harmful behavior, it is not as effective a deterrent as we would like. Even though imperfect, I have no doubt that the criminal sanction plays an important deterrent role generally, and that were criminal penalties abolished for at least certain antisocial conduct, such conduct would increase, in some cases dramatically. Moreover, in addition to its deterrent effect, the criminal law has an important socializing effect, serving an educative or moralizing function. See, e.g., J. GIBB, *supra* note 71, at 68-71; Andenaes, *General Prevention—Illusion or Reality*, 43 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 176, 179-80 (1952). When the criminal sanction has not succeeded in deterring particular kinds of socially harmful behavior as much as we would like, we need to devise new approaches to supplement the criminal sanction. Since fiscal and social costs of increasing law enforcement to levels sufficient to effectively deter such behavior are higher than we are willing or able to bear, we should consider supplemental approaches, like the governmental wager proposed here.

73. See Campbell, *The Effects of Goal-Contingent Payment on the Performance of a Complex Task*, 37 PERSONNEL PSYCHOLOGY 23 (1984); Huber, *Comparison of Monetary Reinforcers and Goal Setting as Learning Incentives*, 56 PSYCHOLOGICAL REP. 223 (1985); Kirschenbaum & Flanery, *supra* note 33; Locke, Shaw, Saari & Latham, *Goal Setting and Task Performance: 1969-1980*, 90 PSYCHOLOGICAL BULL. 125 (1981); Terborg & Miller, *Motivation, Behavior, and Performance: A Closer Examination of Goal Setting and Monetary Incentives*, 63 J. APPLIED PSYCHOLOGY 29 (1978).

74. Campbell, *supra* note 73, at 23; see also Locke, Shaw, Saari & Latham, *supra* note 73.

75. See A. BANDURA, *supra* note 12, at 469 ("Those who set no goals achieve no change . . .").

76. *Id.* at 412-13, 467. Predictions and expectations concerning goal achievement stimulate feelings of self-efficacy, which themselves spark action and effort. See *Id.* at 413; cf. Rotter, *Generalized Expectancies for Internal Versus External Control of Reinforcement*, 80 PSYCHOLOGICAL MONOGRAPHS 1 (1966) (behavior varies with the individual's generalized

monitoring, self-evaluative, and self-reactive processes.⁷⁷ They "serve to structure and guide human endeavors" over the often long period of performance.⁷⁸ Goals provide direction and focus interest, attention, and personal involvement.⁷⁹ The "goal-setting effect" explains why people who have bet they will perform a task try harder and don't give up as easily when success appears difficult or far off.⁸⁰ By entering into a wagering agreement or contingency contract with the government, which reduces the goal to writing, the individual has made the goal concrete, undeniable, and harder to renounce.⁸¹

Not only does the governmental wager make the goal explicit, but it explicitly ties the payoff to its achievement. When reinforcement is offered contingent on the achievement of specific goals, such as when employees are paid on a piece-rate basis, research has demonstrated that performance is significantly higher than when reinforcement is provided non-contingently, such as when employees are paid on an hourly or weekly basis.⁸² By making explicit both the goal and the reward that will be received if it is achieved, or the sanction that will be applied if it is not, the bet allows the individual to understand the instrumental value of his behavior and therefore to take full advantage of the motivating influence that the reinforcement provides. Thus, in line with the cognitive reconceptualization of behaviorism, the bet functions to enhance the power of the reinforcement involved to act as both an informative and motivating influence sparking behavior.

In addition, the external reinforcement received under the wager is not the only and not necessarily the most important behavioral influence that the bet provides. By making self-satisfaction contingent on goal performance, the wager engages a number of important

expectancies that outcomes are determined by his own actions or by external forces beyond his control).

77. A. BANDURA, *supra* note 12, at 469-72.

78. *Id.* at 469.

79. *Id.* at 472.

80. *Id.* at 469-70.

81. *Id.* at 472 ("The degree to which goals create incentives and guides for action is partly determined by their specificity.").

82. E.g., Berger, Cummings & Heneman, *Expectancy Theory and Operant Conditioning Predictions of Performance Under Variable Ratio and Continuous Schedules of Reinforcement*, 14 ORGANIZATIONAL BEHAV. & HUM. PERFORMANCE 227 (1975); Huber, *supra* note 73, at 223-24, 234; Terborg & Miller, *supra* note 73, at 31; Yukl, Wexley & Seymore, *supra* note 70. One exception to this general effect may be creative behavior. See Amabile, Hennessey & Grossman, *Social Influences on Creativity: The Effects of Contracted-for Reward*, 50 J. PERSONALITY & SOC. PSYCHOLOGY 14 (1986). This point is well understood by the MacArthur Foundation, which grants its famous "genius" award, consisting of a generous, non-contingent stipend, to people of exceptional promise to support whatever work that they might like to pursue with the time freed by the award.

intrinsic sources of motivation.⁸³ The wager channels performance and activates self-monitoring and self-evaluative mechanisms that facilitate goal achievement and attitude change. Even apart from receiving the extrinsic reward, winning the bet produces a measure of internal satisfaction that is self-reinforcing. Because the individual voluntarily decides to enter into the governmental wager, the bet itself constitutes an internalizing of the external goal.⁸⁴ Achieving an internalized goal brings personal satisfaction and enhances self-esteem and feelings of self-efficacy. Anticipating these intensely positive feelings inspires greater effort to meet the goal. Failure to achieve an internalized goal, on the other hand, produces dissatisfaction and reduces self-esteem. The feelings produced by the anticipation of failure to meet an internalized goal are so strongly unpleasant that people inevitably act to reduce them, by intensifying their efforts in order to avoid such failure, or conversely, by abandoning the goal itself and disassociating from the experience of having set it.⁸⁵ The psychological processes involved can be explained in terms of what Leon Festinger described as "cognitive dissonance," the tendency of individuals to reinterpret information or experience that conflicts with their internally accepted or publicly stated beliefs in order to avoid the unpleasant personal state that such inconsistencies produce.⁸⁶ This phenomenon affects not only perception, but behavior as well, causing the individual to mobilize his energies and resources in furtherance of the goal in order to avoid the dissonance that failure to achieve it would create.

The individual's anticipated internal reactions to success or failure are thus self-reinforcing in ways that augment the motivating effects of the bet's extrinsic rewards and sanctions. Moreover, these external behavioral influencers will reduce the tendency of people encountering difficulty simply to abandon the goal in order to avoid the internal disappointment of failure. The internal self-reinforcing effects of the bet are enhanced when it is ceremoniously entered into, as by the formal execution of a written contingency contract containing a pledge of performance.⁸⁷ For similar reasons, these effects are enhanced when the internalized goal is publicly communicated to

83. See A. BANDURA, *supra* note 12, at 467, 471-72. See generally E. DECI, *INTRINSIC MOTIVATION* (1975).

84. See A. BANDURA, *supra* note 12, at 477-78.

85. See *id.* at 469-70.

86. See generally L. FESTINGER, *A THEORY OF COGNITIVE DISSONANCE* (1957); L. FESTINGER, *CONFLICT, DECISION, AND DISSONANCE* (1964). For a review of empirical studies on cognitive dissonance, see J. BREHM & A. COHEN, *EXPLORATIONS IN COGNITIVE DISSONANCE* (1962).

87. See A. BANDURA, *supra* note 12, at 477-78; D. MEICHENBAUM & D. TURK, *supra*

others whose esteem and respect the individual values.⁸⁸ Thus, a bet publicly made has a greater chance of success. The anticipated praise and respect that family, friends, and peer group members will provide if the goal is achieved serve as additional positive reinforcement; their anticipated disappointment, and perhaps ridicule if the goal is not achieved, serve as additional motivation to perform. For most people, failure to achieve an internalized and publicly assumed goal is extremely embarrassing, producing feelings of defeat and shame. The individual feels that he has let himself down, as well as others who believed in him. It is a blow to his ego and to his standing in whatever community is important to him. Avoidance of such public embarrassment will provide strong motivation to succeed, at least for most people. The self-evaluative and self-reinforcing aspects of the bet can thus be enhanced if the governmental wager is ceremonialized by the official signing of the wagering agreement and its public announcement.⁸⁹

The offer to wager also harnesses the power of individual choice. Many people do not respond well when told what to do. Unless they themselves see merit in achieving the goal, sometimes even when the costs of non-compliance are high, they may well resent pressure imposed by others and refuse to comply, or act perversely in ways

note 33, at 170, 173-76. See generally C. KIESLER, *THE PSYCHOLOGY OF COMMITMENT: EXPERIMENTS LINKING BEHAVIOR TO BELIEF* (1971).

88. See D. MEICHENBAUM & D. TURK, *supra* note 33, at 170, 174.

89. When an individual's behavior is public, rather than purely private, social psychological influences have a significant impact on his self-conception, and as a consequence, on his future behavior. See generally E. GOFFMAN, *THE PRESENTATION OF SELF IN EVERYDAY LIFE* (1959); R. PETTY & J. CACIOPPO, *ATTITUDES & PERSUASION: CLASSIC AND CONTEMPORARY APPROACHES* 152-55 (1981); *PUBLIC SELF AND PRIVATE SELF* (R. Baumeister ed. 1986). Public behavior invites feedback from others in the form of approval or disapproval, which provides a "social mirror" by which the individual constructs and adjusts his sense of identity. Tedeschi, *Private and Public Experiences and the Self*, in *PUBLIC SELF AND PRIVATE SELF*, *supra*, at 1, 4-5. Publicly exhibited behavior has a potentially greater effect on the individual's future behavior than private behavior, which is easy for the individual to dismiss, distort, or forget. See A. BANDURA, *supra* note 12, at 478; Hovland, Campbell & Brock, *The Effects of "Commitment" on Opinion Change Following Communication*, in *THE ORDER OF PRESENTATION IN PERSUASION* 23 (C. Hovland ed. 1957); Schlenker, *Self-Identification: Toward an Integration of the Private and Public Self*, in *PUBLIC SELF AND PRIVATE SELF*, *supra*, at 21, 26-27. Hence, the goal setting effect, see *supra* notes 73-81 and accompanying text, the individual's commitment to attain a goal he has adopted, and the impact of cognitive dissonance on goal achievement, see *supra* notes 85-86 and accompanying text, are all further enhanced when he has publicly set the goal. See A. BANDURA, *supra* note 12, at 478; C. KIESLER, *supra* note 87, at 16; D. MEICHENBAUM & D. TURK, *supra* note 33, at 174; Hovland, Campbell & Brock, *supra*, at 31-32. These effects of the public commitment to a goal are even further augmented when the individual's commitment is communicated to those whose esteem and respect the individual values. See D. MEICHENBAUM & D. TURK, *supra* note 33, at 170; Schlenker, *supra*, at 28-29.

calculated to frustrate achievement of the goal. By contrast, the offer to wager can be accepted or rejected. The choice is up to the individual. The law strongly favors allowing such choice, rather than attempting to achieve public or private goals through compulsion.⁹⁰

90. See, e.g., *Cruzan v. Director, Missouri Dep't of Health*, 110 S. Ct. 2841, 2856 (1990) (O'Connor, J., concurring) ("[O]ur notions of liberty are inextricably entwined with our idea of physical freedom and self-determination . . ."); *Faretta v. California*, 422 U.S. 806, 833-34 (1975) ("[T]hose who wrote the Bill of Rights . . . understood the inestimable worth of free choice."); *Cleveland Bd. of Educ. v. LaFleur*, 414 U.S. 632, 639-40 (1974) ("This Court has long recognized that freedom of personal choice in matters of marriage and family life is one of the liberties protected by the Due Process Clause of the Fourteenth Amendment."); *Cohen v. California*, 403 U.S. 15, 24 (1971) ("the premise of individual dignity and choice upon which our political system rests"). Respect for individual choice is deeply rooted in American constitutional history and tradition, which were heavily influenced by Enlightenment notions of popular sovereignty and limited government. See generally B. BAILYN, *THE IDEOLOGICAL ORIGINS OF THE AMERICAN REVOLUTION* (1967); C. BECKER, *THE DECLARATION OF INDEPENDENCE: A STUDY IN THE HISTORY OF POLITICAL IDEAS* (1942); Smith, *The Constitution and Autonomy*, 60 TEX. L. REV. 175 (1982). When Jefferson, author of the Declaration of Independence, emphasized the right to "life, liberty, and the pursuit of happiness" among those "unalienable rights" with which all men are endowed, he referred to a right that the individual had against the government to pursue his own ends in his own ways. This was the ideal that Jefferson reiterated in his First Inaugural Address, calling for "a wise and frugal government, which shall restrain men from injuring one another, [but] shall leave them otherwise free to regulate their own pursuits of industry and improvement . . ." INAUGURAL ADDRESSES OF THE PRESIDENTS OF THE UNITED STATES 13, 15 (1965) (First Inaugural Address, March 4, 1801). To secure this right of personal autonomy, among other "blessings of liberty," the colonists ordained and established the Constitution. U.S. CONST. preamble.

Indeed, respect for individual autonomy is a central principle of much of our ethical and political theory, traceable to two major ethical traditions in modern Western philosophy—consequentialist theories, such as the utilitarianism of Jeremy Bentham and John Stuart Mill, and deontological theories, such as those of Immanuel Kant and John Rawls. See J. BENTHAM, *supra* note 15; J. KANT, *FOUNDATIONS OF THE METAPHYSICS OF MORALS* (J. Beck trans. 1949); J. MILL, *ON LIBERTY* (C. Shields ed. 1956); and J. RAWLS, *A THEORY OF JUSTICE* (1971); see also J. FEINBERG, *HARM TO SELF* (1986); J. FEINBERG, *RIGHTS, JUSTICE, AND THE BOUNDS OF LIBERTY: ESSAYS IN SOCIAL PHILOSOPHY* 110-29 (1980); Dworkin, *Paternalism*, in *MORALITY AND THE LAW* 107 (R. Wasserstrom ed. 1971); and Morris, *Persons and Punishment*, 52 *THE MONIST* 475 (1968).

This principle of autonomy permeates much of American law. See, e.g., *Natanson v. Kline*, 186 Kan. 393, 406-07, 350 P.2d 1093, 1104 (1960) ("Anglo-American law starts with the premise of thorough-going self-determination."). For example, it forms a basic premise of our systems of civil and criminal procedure. See R. COVER, O. FISS & J. RESNIK, *PROCEDURE* 1571-72 (1988) (Civil and criminal procedure are "premised upon litigant autonomy."). It also informs much of private law. See, e.g., H. HAVIGHURST, *THE NATURE OF PRIVATE CONTRACT* 30-31 (1961):

[T]he nature of command . . . is vastly different from the nature of contract. . . . The action desired in the one case is brought about by instilling fear, in the other by offering hope. Command threatens the donkey with the stick; contract obtains his willing response by offering him a carrot. The person to whom the command is issued has no choice but to obey; the person to whom an offer for a contract is made may choose whether he will accept or reject. Command is slavery; contract is freedom.

See also 2 *RESTATEMENT (SECOND) OF CONTRACTS* 2-3 (1981) (introductory note to ch. 8)

Aside from the political values reflected in this preference, it is strongly supported by utilitarian considerations. Cognitive and social psychology explain why allowing choice enhances the potential for success. People directed to perform a task do not feel personally committed to the goal or personally responsible for its fulfillment.⁹¹ Choice, on the other hand, brings a degree of commitment that mobilizes the self-evaluative and self-reinforcing mechanisms that facilitate goal achievement.⁹² This explanation is supported by empirical research in a variety of areas suggesting that allowing individuals to exercise choice increases the likelihood of success. Research with children, for example, has demonstrated that involving them in treatment planning and decisionmaking leads to greater compliance and increases the efficacy of treatment.⁹³ Similarly, allowing students to

("The principle of freedom of contract is itself rooted in the notion that it is in the public interest to recognize that individuals have broad powers to order their own affairs by making legally enforceable promises."). In health law, an area closely related to many of the proposed uses of governmental wagering, it serves as the basis for the central doctrine of informed consent. See, e.g., *Canterbury v. Spence*, 464 F.2d 772, 780 (D.C. Cir.), cert. denied, 409 U.S. 1064 (1972); *Natanson v. Kline*, 186 Kan. 393, 406-07, 350 P.2d 1093, 1104 (1960); *In re Conroy*, 98 N.J. 321, 348, 486 A.2d 1209, 1223 (1985); *Schloendorff v. Society of New York Hosp.*, 211 N.Y. 125, 129-30, 105 N.E. 92, 93 (1914) (Cardozo, J.); P. APPELBAUM, C. LIDZ & A. MEISEL, INFORMED CONSENT: LEGAL THEORY AND CLINICAL PRACTICE 22, 26-28 (1987); 1 PRESIDENT'S COMM'N FOR THE STUDY OF ETHICAL PROBLEMS IN MEDICINE AND BIOMEDICAL AND BEHAVIORAL RESEARCH, MAKING HEALTH CARE DECISIONS 2-4 (1982); Appelbaum, Mirkin & Bateman, *Empirical Assessment of Competency to Consent to Psychiatric Hospitalization*, 138 AM. J. PSYCHIATRY 1170 (1981); Beauchamp, *Paternalism and Biobehavioral Control*, 60 THE MONIST 62 (1977); Macklin & Sherwin, *Experimenting on Human Subjects: Philosophical Perspectives*, 25 CASE W. RES. L. REV. 434 (1975); Meisel, *The "Exceptions" to the Informed Consent Doctrine: Striking a Balance Between Competing Values in Medical Decision Making*, 1979 WIS. L. REV. 413, 441; Shultz, *From Informed Consent to Patient Choice: A New Protected Interest*, 95 YALE L.J. 219 (1985); Sprung & Winick, *Informed Consent in Theory and Practice: Legal and Medical Perspectives on the Informed Consent Doctrine and a Proposed Reconceptualization*, 17 CRITICAL CARE MED. 1346, 1346 (1989).

91. A. BANDURA, *supra* note 12, at 338, 363, 368, 468-69, 470-71, 475-76, 478-79. This feeling may apply even for tasks the individual is directed to perform in furtherance of his own best interests. One example is medical treatment. When physicians do not allow patient participation in treatment decisions and do not explain treatment to them, patients tend to fail to comply with medical advice. See P. APPELBAUM, C. LIDZ & A. MEISEL, *supra* note 90, at 28; Appelbaum & Gutheil, *Drug Refusal, A Study of Psychiatric Inpatients*, 137 AM. J. PSYCHIATRY 340, 341 (1980); Shultz, *supra* note 90, at 293 & n.323. See generally D. MEICHENBAUM & D. TURK, *supra* note 33.

92. A. BANDURA, *supra* note 12, at 338, 363, 368, 468, 478-79.

93. See Lewis, *Decision Making Related to Health*, in CHILDREN'S COMPETENCE TO CONSENT 75 (1981); Melton, *Children's Competence to Consent, A Problem in Law and Social Science*, in CHILDREN'S COMPETENCE TO CONSENT, *supra*, at 1, 11; Melton, *Children's Participation in Treatment Planning: Psychological and Legal Issues*, 12 PROF. PSYCHOLOGY 246, 250-51 (1981); Melton, *Decision Making in Children: Psychological Risks and Benefits*, in CHILDREN'S COMPETENCE TO CONSENT, *supra*, at 21, 30-31. Treatment adherence in general has been shown to increase when the patient is given choice and participation in the selection

make choices about educational programs causes them to work "harder, faster, and [react] more positively to the situation than when they [are] unable to make such choices."⁹⁴ It has also been suggested that medical and mental health treatments are more effective when provided on a voluntary, rather than involuntary, basis.⁹⁵ Moreover, having and making choices is developmentally beneficial. Except for young children, and sometimes even including them, the more choice we give individuals, the more they will act as mature, self-determining adults. Treating individuals as adults able to make choices, rather than as incompetent subjects of our paternalism, pity, or even contempt, will have a therapeutic effect. Hopefully, these individuals will come to view themselves as in control of their lives, rather than as mere passive victims of forces they can neither understand nor con-

of treatment alternatives and goals. D. MEICHENBAUM & D. TURK, *supra* note 33, at 157, 159, 175; Kanfer & Gaelick, *Self-Management Methods*, in *HELPING PEOPLE CHANGE* 334 (1986).

94. Brigham, *Some Effects of Choice on Academic Performance*, in *CHOICE AND PERCEIVED CONTROL* 131, 140 (1979); see also Amabile & Gitomer, *Children's Artistic Creativity: Effects of Choice for Task Materials*, 10 *PERSONALITY & SOC. PSYCHOLOGY BULL.* 209 (1984) (restriction of choice negatively affects creativity).

95. See P. APPELBAUM, C. LIDZ & A. MEISEL, *supra* note 90, at 28; S. BRAKEL, J. PARRY & B. WEINER, *THE MENTALLY DISABLED AND THE LAW* 178 & n.2, 181 n.34 (3d ed. 1985); D. MEICHENBAUM & D. TURK, *supra* note 33, at 175; Appelbaum, Mirkin & Bateman, *supra* note 90; Culver & Gert, *The Morality of Involuntary Hospitalization*, in *THE LAW-MEDICINE RELATION: A PHILOSOPHICAL EXPLORATION* 159, 171 (1981); Freedberg & Johnston, *Effects of Various Sources of Coercion on Outcome of Treatment of Alcoholism*, 43 *PSYCHOLOGICAL REP.* 1271, 1277 (1978); Nicholson, *Correlates of Commitment Status in Psychiatric Patients*, 100 *PSYCHOLOGICAL BULL.* 241, 244 (1986); Perlin & Sadoff, *Ethical Issues in the Representation of Individuals in the Commitment Process*, 45 *LAW & CONTEMP. PROBS.* 161, 190 (1982); Rogers & Webster, *Assessing Treatability in Mentally Disordered Offenders*, 13 *LAW & HUM. BEHAV.* 19, 20-21 (1989); Stein & Test, *Alternative to Mental Hospital Treatment*, 37 *ARCHIVES GEN. PSYCHIATRY* 392 (1980); Stromberg & Stone, *A Model State Law on Civil Commitment of the Mentally Ill*, 20 *HARV. J. LEGIS.* 275, 327 (1983); Ward, *Use of Legal Coercion in the Treatment of Alcoholism: A Methodological Review*, in *ALCOHOLISM: INTRODUCTION TO THEORY AND TREATMENT* 272 (D. Ward ed. 1980); Note, *Developments in the Law—Civil Commitment of the Mentally Ill*, 87 *HARV. L. REV.* 1190, 1399 (1974). Professors Durham and La Fond's extensive review of the literature on the effectiveness of psychotherapy and psychotropic medication, the two most prevalent forms of treatment for the mentally ill, found no persuasive evidence that coercive application of these techniques to involuntarily committed patients, as opposed to those seeking and receiving treatment in non-hospital settings, was effective. Durham & La Fond, *A Search for the Missing Premise of Involuntary Therapeutic Commitment: Effective Treatment of the Mentally Ill*, 40 *RUTGERS L. REV.* 303 (1988); see Durham & La Fond, *The Empirical Consequences and Policy Implications of Broadening the Statutory Criteria for Civil Commitment*, 3 *YALE L. & POL'Y REV.* 395 (1985) (analyzing adverse effects of a statutory broadening of civil commitment standards); see also *Washington v. Harper*, 110 S. Ct. 1028, 1051 n.15 (1990) ("The efficacy of forced drugging is also marginal; involuntary patients have a poorer prognosis than cooperating patients.") (Stevens, J., dissenting); *Rennie v. Klein*, 462 F. Supp. 1131, 1144 (D.N.J. 1978) ("[T]he testimony has indicated that involuntary treatment is much less effective than the same treatment voluntarily received.").

trol—a feeling that undoubtedly contributes to the existence and continuation of their social problems.⁹⁶

In this way, the governmental wager can be rehabilitative, functioning as an instrument of social redemption. By activating the power of individual choice and mobilizing the self-evaluative and self-reinforcing mechanisms of intrinsic motivation, the wager has the potential to initiate a course of conduct that the individual will continue even beyond the time when the extrinsic rewards of the wager can be available.⁹⁷ The amount paid out by the government upon successful performance of the goal can be seen not merely as a social cost—an expenditure incurred to achieve a particular public goal—but also as a capital investment in our socially disadvantaged that can produce enormous future returns of individual and social utility.

Engaging the power of individual choice is thus an essential ingredient of the wagering scheme proposed here. To succeed in activating the psychological benefits of choice, the wager must be offered on a purely voluntary basis—without undue inducement or any element of force, fraud, deceit, duress, or coercion. To the extent that the individual perceives himself to be coerced into entering a wager with the government, these benefits may be lost and the individual may fail to meet the goal or may simply achieve it to obtain the extrinsic reinforcement offered without having it stimulate intrinsic

96. The concept of "learned helplessness" seems useful in this connection. It posits that repetitive events outside an individual's control may produce a generalized feeling of ineffectiveness that debilitates performance and undermines motivation and feelings of self-efficacy. See M. SELIGMAN, *HELPLESSNESS: ON DEPRESSION, DEVELOPMENT, AND DEATH* (1975); Abramson, Seligman & Teasdale, *Learned Helplessness in Humans: Critique and Reformulation*, 87 J. ABNORMAL PSYCHOLOGY 49 (1978); Maier & Seligman, *Learned Helplessness: Theory and Evidence*, 105 J. EXPERIMENTAL PSYCHOLOGY 3 (1976); Thornton & Jacobs, *Learned Helplessness in Human Subjects*, 87 J. EXPERIMENTAL PSYCHOLOGY 367 (1971); see also Rotter, *supra* note 76 (viewing behavior as a function of individual expectancies concerning whether outcomes are determined by his actions or by external forces beyond his control). By contrast, when an individual exercises control and makes choices, he experiences increased opportunities to build skills necessary for successful living. As a result he gradually acquires feelings of self-efficacy, which in turn become important determinants of motivation and performance. See A. BANDURA, *supra* note 12, at 390-449.

97. Self-reinforcing contingencies, like the feeling of a job well done, have been shown to continue the improved employee performance produced initially by a contingent reinforcement program, even after the external incentives were withdrawn:

The injection of the contingent reinforcement may have been necessary to get the salespersons' performance behavior tracking in the desired direction, but then other existing, natural reinforcers (e.g., a supervisor's praise, positive customer reactions, or even self-reinforcing contingencies such as the feeling of a job well done) in the environment took over to maintain the behavior when the intervention was withdrawn.

Luthans, Paul & Baker, *An Experimental Analysis of the Impact of Contingent Reinforcement on Salespersons' Performance Behavior*, 66 J. APPLIED PSYCHOLOGY 314, 319 (1981).

motivation and without realizing any lasting effects. The individual's perception of coercion or external control may be as detrimental as coercion itself. For lasting behavior change to occur, the individual must attribute his new behavior pattern to internal mechanisms; to the extent that he attributes it to extrinsic forces, such as to obtain the reward or avoid the penalty, attitude change will not occur.⁹⁸ This danger exists not only when the individual's decision to enter into the wagering agreement is produced by outright coercion, but also when the reward offered is so enticing (or penalty to be imposed so repellent) that he feels compelled to participate and succeed. This phenomenon is related to what has been termed the "overjustification effect,"⁹⁹ which predicts that the use of external reinforcers that are too "strong" will reduce the potential that intrinsic motivation to perform the behavior will take root, or will corrode any such motivation that the individual already might possess. The objective of the wagering agreement ultimately must be to effect lasting attitudinal and behavioral change in the individual, not merely to induce performance of the particular goal that results in earning the reward. To achieve such lasting change, coercive approaches or the use of "coercive" reinforcers or penalties should be avoided.¹⁰⁰

Although there is no empirical evidence on the question,¹⁰¹ it is

98. See E. DECI, *supra* note 83; C. KIESLER, *supra* note 87, at 164-65; R. PETTY & J. CACIOPPO, *supra* note 89, at 169-70; Deci, *Effects of Externally Mediated Rewards on Intrinsic Motivation*, 18 J. PERSONALITY & SOC. PSYCHOLOGY 105 (1971); Deci & Ryan, *The Empirical Exploration of Intrinsic Motivation Processes*, in 13 ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY (L. Berkowitz ed. 1980).

99. See R. PETTY & J. CACIOPPA, *supra* note 89, at 169-70; Amabile, Hennessey & Grossman, *supra* note 82, at 14; Deci, *supra* note 98, at 115; Lepper, Greene & Nisbett, *Undermining Children's Intrinsic Interest with Extrinsic Rewards: A Test of the "Overjustification" Hypothesis*, 28 J. PERSONALITY & SOC. PSYCHOLOGY 129 (1973); Ross, *Salience of Reward and Intrinsic Motivation*, 32 J. PERSONALITY & SOC. PSYCHOLOGY 245 (1975); cf. C. KIESLER, *supra* note 87, at 167 ("[T]he amount of incentive offered for a particular behavior is closely related to a perception of pressure to behave. The more one is offered to act, the less options one feels one has."); Festinger & Carlsmith, *Cognitive Consequences of Forced Compliance*, 58 J. ABNORMAL & SOC. PSYCHOLOGY 203 (1959) (attitude change more likely when modest reinforcers are used rather than overly generous reinforcers which lead the individual to attribute his response to the external motivator).

100. C. KIESLER, *supra* note 87, at 167.

101. The literature on the efficacy of coercive treatment is both scarce and methodologically limited. See Meichenbaum, *Legal Coercion and Treatment Adherence: Critical Questions and Tentative Answers* 17-21 (Jan. 1990) (unpublished paper, proposed for the MacArthur Foundation Program of Research on Mental Health and the Law, on file with *University of Miami Law Review*). Compare S. BREHM & J. BREHM, *PSYCHOLOGICAL REACTANCE: A THEORY OF FREEDOM AND CONTROL* (1981) (coercion may backfire, producing "psychological reactance") and Ward, *supra* note 95, at 272 (finding "no scientific basis upon which to accept the proposition that the use of legal coercion is effective in treating the alcoholic") with Collins & Allison, *Legal Coercion and Retention in Drug Abuse Treatment*, 34 HOSP. & COMMUNITY PSYCHIATRY 1145, 1145 (1983) (patients legally induced to enter drug

possible that the wager might succeed, to at least some extent, in situations involving some degree of coercion—when it is entered as a condition of parole or diversion from the criminal process, for example. But theory would predict the greatest potential for success for wagers entered into on a purely voluntary basis. Only then will the psychological mechanisms of commitment and internal motivation that are engaged by choice be fully mobilized.¹⁰² People entering the wager who feel they have no real choice but to do so may agree but resent it, and as a result, may simply go through the motions of performance without deriving real benefit.

The concepts of “coercion” and “voluntariness” present complex psychological,¹⁰³ philosophical,¹⁰⁴ and legal¹⁰⁵ issues that deserve more exploration than this brief discussion allows. To depict coercion and voluntariness as a dichotomous inquiry is artificial and misleading. Virtually no choice in life is totally free of coercion; rather, there are degrees of coercion falling along a continuum, and where we place the dividing line between coercion and voluntariness is a normative judgment.¹⁰⁶ The values involved here are not exclusively the legal ones invoked in determining whether a particular choice was coerced in a legal sense. The law is primarily concerned with the protection of

abuse treatment stayed in treatment programs longer than, and did at least as well as, those who sought treatment voluntarily); Fagan & Fagan, *The Impact of Legal Coercion on the Treatment of Alcoholism*, 82 J. DRUG ISSUES 103 (1982); Flores, *The Efficacy of the Use of Coercion in Getting DWI Offenders into Treatment*, 28 J. ALCOHOLISM & DRUG EDUC. 18, 24-25 (1982) (individuals coerced into alcoholism treatment by threat of loss of driver's licence did as well as those entering counseling voluntarily); and Salmon & Salmon, *The Role of Coercion in Rehabilitation of Drug Abusers*, 18 INT'L J. ADDICTION 9 (1983) (treatment coerced by possible loss of job worked effectively).

102. See C. KIESLER, *supra* note 87, at 167.

103. See Goldiamond, *Protection of Human Subjects and Patients: A Social Contingency Analysis of Distinctions Between Research and Practice, and its Implications*, 4 BEHAVIORISM 1 (1976); Goldiamond, *supra* note 2, at 121-26.

104. See COERCION: NOMOS XIV (J. Pennock & J. Chapman eds. 1972); J. FEINBERG, HARM TO SELF 229-68 (1986); J. RAZ, THE MORALITY OF FREEDOM (1986); A. WERTHEIMER, COERCION (1987); Murphy, *Consent, Coercion and Hard Choices*, 67 VA. L. REV. 79 (1981); Murphy, *Total Institutions and the Possibility of Consent to Organic Therapies*, 5 HUM. RTS. 25 (1975).

105. See A. WERTHEIMER, *supra* note 104, at 172, 267-68, 287, 301, 308; Dix, *Waiver in Criminal Procedure: A Brief for More Careful Analysis*, 55 TEX. L. REV. 193 (1977); Singer, *Consent of the Unfree, Pt. II*, 1 LAW & HUM. BEHAV. 101 (1977); Sullivan, *Unconstitutional Conditions*, 102 HARV. L. REV. 1413 (1989); Tigar, *Forward: Waiver of Constitutional Rights: Disquiet in the Citadel*, 84 HARV. L. REV. 1 (1970); Winick, *Legal Limitations on Correctional Therapy and Research*, 65 MINN. L. REV. 331, 383-92 (1981).

106. For an analysis of coercion as involving a continuum, see J. FEINBERG, *supra* note 104, at 255-56; Goldiamond, *supra* note 103, at 27; and Jaffe, *Law as a System of Control*, in EXPERIMENTATION WITH HUMAN SUBJECTS 203, 216 (P. Freund ed. 1969). For recognition of coercion as a normative concept, see J. RAZ, *supra* note 104, at 148-57; A. WERTHEIMER, *supra* note 104, at 211-17; and Sullivan, *supra* note 105, at 1446-50.

rights; in defining coercion, the law may not reflect other values, such as program efficacy. Indeed, typical legal approaches to coercion may well result in finding acceptable choices that should be rejected if judged by the standard of program success and individual enhancement sought to be accomplished by the governmental wager. The law typically limits coercion, in the context of offers or proposals, to those that are illegal or otherwise improper.¹⁰⁷ This requirement should serve as a necessary, but not a sufficient, condition for the voluntariness required to enter into a wager with the government of the kind proposed here. Undoubtedly, there are offers that, although not improper, provide inducements that are quite irresistible, given the circumstances and preferences of the individual involved.

Psychologist Israel Goldiamond has offered a useful behavioral conceptualization of voluntariness and coercion, defining situations of coercion and noncoercion through the use of a contingency analysis.¹⁰⁸ In this model, coercion is most severe when there are no genuine choices and the consequences contingent on behavior are critical.¹⁰⁹ If an individual perceives himself coerced into entering a governmental wager because he feels that, in the circumstances, he has no real choice other than to do so, such psychological pressure may interfere with the wager's potential for success. Psychological pressure of this kind would not necessarily be unlawful; for example, it would not invalidate a criminal defendant's choice to enter into a plea bargain.¹¹⁰ However, such psychological pressure, although not constituting coercion in a legal sense, would be counterproductive in light of the purpose for which voluntariness is made a condition for entering the wager—to promote the successful achievement of the individual or social goal involved. As a result, only offers to wager that do not create such psychological pressures should be permitted.¹¹¹ Rewards in particular wagers should, therefore, be carefully

107. See A. WERTHEIMER, *supra* note 104, at 172, 267-68, 287, 301, 308; see, e.g., *Brady v. United States*, 397 U.S. 742, 755 (1970) (A guilty plea "must stand unless induced by threats . . . misrepresentation . . . or perhaps by promises that are by their nature improper," such as bribes); RESTATEMENT (SECOND) OF CONTRACTS §§ 174-76 (1981) (standard of duress limited to physical compulsion or improper threats).

108. See Goldiamond, *supra* note 103, at 20-34; Goldiamond, *supra* note 2, at 121-25.

109. See Goldiamond, *supra* note 103, at 23.

110. See, e.g., *Corbitt v. New Jersey*, 439 U.S. 212, 222-23 (1978); *Bordenkircher v. Hayes*, 434 U.S. 357, 364 (1978); *Blackledge v. Allison*, 431 U.S. 63, 71 (1977); *Brady v. United States*, 397 U.S. 742, 755 (1970).

111. The potential might exist for intense peer, teacher, and parent pressure to be applied to individuals to influence them to engage in the wager, thereby reducing the individual's perception that he is making a voluntary choice. This will dissipate the psychological power of choice that is an important ingredient in the success of the wager. I reiterate my suggestion that unless the wager is done on a purely voluntary basis, it will not be as effective. See *supra*

tailored so as not to provide inducements that the individual involved will find irresistible. Voluntariness, in short, should be the hallmark of the governmental wager.

III. APPLICATIONS OF THE PRINCIPLE: WAGERING WITH THE GOVERNMENT AS A MEANS OF ACCOMPLISHING PUBLIC GOALS

In this section, I illustrate how the wagering approach might work in a number of specific areas. I start with what undoubtedly will be considered the most controversial and perhaps implausible application—the problem of drug addiction. Many of the suggested applications described later—to increase productivity in civil servants, to attack the welfare problem, and to deal with a variety of educational, social, and health problems in both the public and private sectors—are more plausible candidates for wagering. I start with the drug addiction context, however, because it provides a good opportunity to illustrate and examine in greater depth the psychological principles on which wagering is based, and because it is useful to understand drug addiction behaviorally. In addition, drug addiction is an intractable social problem, and it is becoming increasingly clear that existing approaches have not worked. We thus need to view the problem in new and different ways if we are to craft creative solutions.

A. *The Problem of Drug Addiction*

Addiction to heroin, cocaine and its smokable derivative, crack, as well as to other drugs of abuse, is widely considered to be our most serious domestic problem.¹¹² Drug abuse leads to devastating individ-

notes 90-100 and accompanying text. I recognize the potential that the ideas advanced in this Article could be perverted into a quasi-compulsive wagering scheme. This is not what is contemplated here.

112. In his September 5, 1989 speech on national drug control strategy, President Bush characterized the drug problem as "the toughest domestic challenge we've faced in decades." N.Y. Times, Sept. 6, 1989, at 1, col. 6. In a recent *New York Times*/CBS News Poll, 64% of respondents considered drugs to be the nation's single worst problem. Wicker, *The Wartime Spirit*, N.Y. Times, Oct. 3, 1989, at 23, col. 1. The drug problem is undeniably a serious social problem, and it seems to be getting worse. But in my view, at least for many addicts, it is in large part a symptom of a more serious underlying problem—the growing disparity in wealth and opportunity in our society and the problems of social justice that this raises. Although the drug problem exists in every social class, there can be little doubt that the widespread abuse of drugs in our inner cities is related to these problems of social justice. Many poor people, perceiving no real hope of escaping poverty, find drugs to be an attractive alternative to the grim reality of their lives. See Skolnick, *A Critical Look at the National Drug Control Strategy*, 8 YALE L. & POL'Y REV. 75, 101 (1990). Wagering with the government will not solve this underlying problem, of course. This is the real and unmet agenda for social reform that cannot be ignored if we are seriously interested in solving the "drug problem."

ual and public health problems, including death from overdose, the birth of addicted babies, and the spread of AIDS from the sharing of hypodermic needles. It causes family and social disintegration, imposes serious costs to employers and to the economy generally, and has increased crime dramatically. Drug abusers frequently deplete their resources, lose their jobs, and alienate friends and family, ending up on the streets, homeless, destitute, and hopelessly addicted. The lure of enormous drug profits corrupts our youth, legitimate businesses, and law enforcement and other public officials. The social stakes in solving the drug problem are exceedingly high, yet we seem to be losing ground, notwithstanding the expenditure of billions of dollars. New approaches obviously are needed.

Applying the principles of learning theory discussed earlier to the problem of addiction can be illuminating. At a basic level, addiction can be understood as operant behavior: The behavior of drug self-administration is established and maintained by the pharmacological effects of the drug, which function as a potent reinforcer.¹¹³ Not only does the drug provide positive reinforcement as a result of its primary biochemical effects, but it also serves as a negative reinforcer by enabling the drug taker to avoid or reduce the stress or tension produced by various life events.¹¹⁴ When the drug is physiologically addictive, this negative reinforcement also includes the effect of the drug in enabling the addict to avoid the distress of withdrawal, an effect that can be a very powerful motivator.¹¹⁵ Positive reinforcement also may be provided by the social status of drug-taking among certain peer groups. In addition, under principles of classical conditioning, the setting and stimuli associated with drug use, such as the ritual of self-injection, can themselves become secondary reinforcers

113. See J. ORFORD, *EXCESSIVE APPETITES: A PSYCHOLOGICAL VIEW OF ADDICTIONS* 174-80 (1985); Bigelow, Stitzer & Liebson, *The Role of Behavioral Contingency Management in Drug Abuse Treatment*, in *BEHAVIORAL INTERVENTION TECHNIQUES IN DRUG ABUSE TREATMENT* 36-39 (1984); Donegan, Rodin, O'Brien & Solomon, *A Learning-Theory Approach to Commonalities*, in *COMMONALITIES IN SUBSTANCE ABUSE AND HABITUAL BEHAVIOR* 111 (1983); Solomon, *The Opponent-Process Theory of Acquired Motivation: The Costs of Pleasure and the Benefits of Pain*, 35 *AM. PSYCHOLOGIST* 691 (1980); Teasdale, *Conditioned Abstinence in Narcotic Addicts*, 8 *INT'L J. ADDICTIONS* 273 (1973); Wikler, *Dynamics of Drug Dependence: Implications of Conditioning Theory for Research and Treatment*, 28 *ARCHIVES GEN. PSYCHIATRY* 611 (1973); see also Vuchinich & Tucker, *Contributions from Behavioral Theories of Choice to an Analysis of Alcohol Abuse*, 97 *J. ABNORMAL PSYCHOLOGY* 181 (1988) (behavioral explanation of alcoholism). For an analysis of the pharmacology of heroin and the other opiate drugs, see Freedman, *Drug Dependence*, in 2 *COMPREHENSIVE TEXTBOOK OF PSYCHIATRY* 1591, 1597-1603 (3d ed. 1980).

114. See J. ORFORD, *supra* note 113, at 178.

115. See *id.* at 178-80; Wikler, *supra* note 113.

that condition and help to maintain behavioral patterns.¹¹⁶

This basic behavioral conceptualization of addiction is strongly supported by experimental research on drug self-administration conducted with both animal and human subjects across a variety of drugs and methods of administration.¹¹⁷ That animals show patterns of drug self-administration similar to those observed in humans strongly suggests that some preexisting psychopathology is not a prerequisite to drug addiction. The behavioral view, however, does not mean that drug self-administration is involuntary behavior, that the particular drug itself causes the user to become addicted in a manner beyond his control.¹¹⁸ Many people who experiment with drugs or who use them occasionally in moderation do not become addicted, and many who become addicted subsequently discontinue their drug-taking voluntarily.¹¹⁹ Thus, drugs are not irresistible; some people simply decline to resist them. Under the behavioral conception, the drug is a reinforcer that influences the user's behavior. It is not, however, an automatic

116. See S. PEELE, *THE MEANING OF ADDICTION: COMPULSIVE EXPERIENCE AND ITS INTERPRETATION* 66 (1985); Donegan, Rodin, O'Brien & Solomon, *supra* note 113, at 127-30, 132-34; O'Brien, *Experimental Analysis of Conditioning Factors in Human Narcotic Addiction*, 27 *PHARMACOLOGICAL REV.* 533 (1975); Wikler, *supra* note 113.

117. See J. ORFORD, *supra* note 113, at 174-75; Bigelow, Stitzer & Liebson, *supra* note 113, at 37-38; Deneau, Yanagita & Seevers, *Self-Administration of Psychoactive Substances by the Monkey*, 16 *PSYCHOPHARMACOLOGIA* 30 (1969); Griffiths, Bigelow & Henningfield, *Similarities in Animal and Human Drug-Taking Behavior*, in *ADVANCES IN SUBSTANCE ABUSE* (N. Mello ed. 1980); Kumar & Stolerman, *Experimental and Clinical Aspects of Drug Dependence*, in 7 *HANDBOOK OF PSYCHOPHARMACOLOGY* 321 (1977); Schuster & Thompson, *Self-Administration of and Behavioral Dependence on Drugs*, 9 *ANN. REV. PHARMACOLOGY* 483 (1969). These studies tend to show that animals, confined in cages, given an opportunity to administer drugs will do so repeatedly. Some studies show that animals in more natural settings, for whom a greater variety of behavioral opportunities are open, will not self-administer drugs as frequently. See S. PEELE, *supra* note 116, at 77-96 (reviewing studies). These studies demonstrate that even powerfully reinforcing drugs do not automatically determine behavior, but that situational variables play an undeniable role. The behavioral paradigm, particularly as reconceptualized using the insights of cognitive theory, provides a framework within which the role of these other variables can be understood. Drug-taking behavior, although it varies depending upon the incentive preferences and values of the individual, which are shaped by a variety of cultural, psychodynamic, and environmental forces, is still learned behavior that can best be understood within the behavioral paradigm.

118. See S. PEELE, *supra* note 116, at 94; Becker & Murphy, *A Theory of Rational Addiction*, 96 *J. POL. ECON.* 675, 682 (1988); Schwartz, *Views of Addiction and the Duty to Warn*, 75 *VA. L. REV.* 509, 521, 531-34, 537-38, 544-45 (1989). Addiction to a variety of substances (alcohol, nicotine, caffeine, chocolate) or behavior patterns (jogging, television viewing, gambling, religion, romantic love) generally can be understood in terms of the basic behavior paradigm. See Solomon, *supra* note 113, at 691. As with drugs, none of these substances or activities causes addiction in a manner beyond the individual's control.

119. See J. ORFORD, *supra* note 113, at 271; Freedman, *supra* note 113, at 1597; Peele, *A Moral Vision of Addiction: How People's Values Determine Whether They Become and Remain Addicts*, 17 *J. DRUG ISSUES* 187, 202-03 (1987); Schwartz, *supra* note 118, at 521; Skolnick, *supra* note 112, at 100.

determinant of behavior. Although the drug may be a particularly powerful reinforcer, like all reinforcers, its effects are cognitively mediated, producing voluntary behavior in line with the user's value preferences and choices.¹²⁰ Because some people value the short-term effects of a particular drug very highly notwithstanding the long-term negative consequences of addiction, they succumb to the strong temptation that the drug presents.¹²¹ Others, with different value preferences, will react differently.

There are many other theories attempting to explain drug addiction—for example, as a medical problem, as genetically determined, as culturally determined, as an individual adjustment reaction, as a personality disorder, as a psychosocial problem, and as a moral problem.¹²² Some of these theories help to explain why some people respond to the reinforcement of drugs while others do not—that is, why some people value the drug experience or are more susceptible to it than others. Yet, except for the behavioral model, none of these theories explain addictive behavior generally; none provide a unified conceptual framework for understanding addiction. The basic paradigm of learning theory, however, provides such a framework. Drug-taking behavior, after all, is behavior, and like all behavior, it is learned and maintained (and can be unlearned) in accordance with these basic principles. All behavior, of course, is determined by a variety of factors. While other theories of addiction may be helpful in understanding some of these situational variables, and why some individuals respond to drugs while others do not, none have the explanatory power of the behavioral model.

I can confirm much of the validity of the behavioral model of addiction out of a personal experience with drug addiction. The substance that I became hooked on was capuccino, which science knows to contain a heavy dose of the addictive drug caffeine. I do not sug-

120. See *supra* notes 53-60 and accompanying text.

121. This explanation is consistent with an economic model of addiction based on rational choice theory. See Becker & Murphy, *supra* note 118; Iannaccone, *Addiction and Satiation*, 21 *ECON. LETTERS* 95 (1986).

122. See, e.g., AMERICAN PSYCHIATRIC ASS'N, DIAGNOSTIC & STATISTICAL MANUAL OF MENTAL DISORDERS 165-85 (3d rev. ed. 1987) (psychoactive substance use disorder); S. PEELE, *supra* note 116; THEORIES OF DRUG ABUSE (D. Lettieri, M. Soyers & H. Pearson eds. 1980); Alexander, *The Disease and Adaptive Models of Addiction: A Framework Evaluation*, 17 *J. DRUG ISSUES* 47 (1987); Craig, *A Psychometric Study of the Prevalence of DSM-III Personality Disorders Among Treated Opiate Addicts*, 23 *INT'L J. ADDICTIONS* 115 (1988); Freedman, *supra* note 113, at 1595-97; Nathan, *The Addictive Personality is the Behavior of the Addict*, 56 *J. CONSULTING & CLINICAL PSYCHOLOGY* 183 (1988); Peele, *supra* note 119; Sunstein, *Legal Interference with Private Preferences*, 53 *U. CHI. L. REV.* 1129, 1158-61 (1986); Schwartz, *supra* note 118, at 517-45; Tarter & Edwards, *Vulnerability to Alcohol and Drug Abuse: A Behavior-Genetic View*, 17 *J. DRUG ISSUES* 67 (1987).

gest that all drugs function the same, of course; some—cocaine, for example—are undeniably more powerful as reinforcers than others, and significantly more addicting than caffeine. There are several other important differences between caffeine and other addicting drugs. Caffeine, unlike many other addicting drugs, is entirely legal. Moreover, although many addicting drugs are known to be addictive and possibly dangerous, I had not realized this about caffeine. Nevertheless, despite these differences and many others, the experience of becoming addicted to caffeine and that of becoming addicted to these other substances bear important similarities. Indeed, I believe that my experience with caffeine is not unrepresentative of the basic experience of becoming addicted to other drugs.

I start with an additional caveat: The following anecdotal account does not purport to be an empirical investigation of the subject, and certainly not one meeting the rigors of acceptable research methodology. No claim therefore is made that this experience confirms the validity of the behavioral model of addiction in a scientific sense. My story, however, is offered in the same spirit in which medical research, until quite recently, was reported.

I started out as a strict teetotaler—literally. I never even drank coffee, limiting myself to herbal teas. Nevertheless, at one point I was induced to try capuccino. At first, I didn't really like it, but I persisted. After a period of what could be characterized as "experimental use," followed by several years of enjoying it sporadically, often with friends, I began to drink it everyday. I limited my acquisition of the substance to one local purveyor in Coconut Grove, where I live. Then, on a recent three week sojourn to New York to complete the research on this very Article, I learned that my use of the drug had grown into a dependence.

During my visit, I had planned to leave this drug at home, but after as few as two days without a "fix," I felt strange. Accustomed to being in excellent health, I suddenly noticed a malaise, a disturbance, and the onset of a physiological reaction I virtually never experience—a headache. At first I thought I was coming down with something, a cold perhaps, or (perish the thought) the flu—a reaction to the sudden chill of the city, then experiencing a record-breaking cold spell over the duration of the entire month. But it wasn't *that* cold. I had dressed appropriately, and enjoyed my occasional breaks from the work to walk around town. And my nose wasn't even running.

I began to search for an alternative hypothesis to explaining my symptoms. During one of my walks, I found myself in the West Village and encountered the opportunity to purchase the drug that, little

known to me at the time, was responsible through its absence for my growing symptoms. After consuming a quantity of it quickly, with unexpected relish, I purchased an additional amount. My headache was suddenly gone. I felt a slight "buzz," the dawning of the high characteristically produced by the drug. I began to realize that I was hooked, no longer the casual user I had thought myself to be. I had been transformed from an experimenter to a user, to a devotee of the substance, to one who was, let it be admitted, psychologically addicted. And now my addiction was physiological; the feelings I had encountered were the classic symptoms of withdrawal. I could no longer deny the shocking truth: You see, I had become addicted to capuccino.

Now, it may be possible to characterize my capuccino habit as a medical problem or an individual adjustment reaction, or, given the wide use and acceptability of caffeine in the legal and academic circles in which I move, as culturally ordained. And I do recall my mother being an occasional coffee drinker, suggesting the possibility of a genetic explanation. But I find the behavioral paradigm more persuasive: I learned to like the taste of capuccino and the change in mood it produced, and these inherent characteristics of the drug reinforced my capuccino self-administration to the point that I developed a habit, and one that ultimately took on a physiological character. The positive reinforcement of the drug's primary effects and the secondary reinforcement of such associated stimuli as its aroma and taste and the pleasures of the *patisserie* in which I ingested it, had become supplemented by the negative reinforcement of the desire to avoid the unpleasant feelings of caffeine withdrawal. All this had conspired to establish and maintain my habitual consumption of the drug.

Viewing drug addiction behaviorally has obvious implications for designing approaches to the prevention and treatment of drug addiction. As with other types of operant behavior, drug-taking behavior can be influenced in predictable ways by manipulation of behavioral contingencies. Obviously, the elimination or substantial reduction in the supply of drugs will have a dramatic impact on the prevalence of drug abuse problems. This is the "supply-side" solution, focusing on interdiction of drugs at the border, defoliation of crops, and law enforcement activities to deter distribution and use. Despite the commitment of enormous resources to supply-side approaches, however, the supply of drugs has steadily increased. Increased demand and enormous profits encourage more suppliers to enter the market. As a consequence, production increases, followed by a drop in price, which, in turn, stimulates more demand, followed again by increased

supply. It's simple economics. Without seriously dealing with the demand side, these law enforcement approaches are unlikely to succeed.

Dealing with demand means committing more resources and designing new approaches to prevention and treatment. We need more educational programs to reach children and adolescents before they experiment with drugs, and treatment programs to help those who already have developed a problem. The need for prevention and treatment approaches would increase even more if we legalize drugs, as is increasingly being suggested.¹²³

Existing models for prevention and treatment exist, but they are not always successful. Many of the targets of such programs are uninterested in participating. Many who do so are not sufficiently motivated to succeed. It is easy, for example, to attend a school drug education program but "tune out" the teacher. To motivate children and adolescents to attend such programs and to participate meaningfully in them, the government could offer a wager. A reward, financial or otherwise, could be offered for successful completion of such a program, with an appropriate penalty to be imposed if success is not attained. Success could be defined as attendance at a certain percentage of classes and achievement of a particular score on a written exam testing the assimilation of the material taught, just as we condition the issuance of a driver's license on attaining a passing score on a written exam testing knowledge of the rules of the road.

A straightforward presentation of the facts about drug abuse, if attended to, should have the desired result for at least some people.¹²⁴ All we need to do is tell our children the truth about how drugs work and the serious risks they present. Surely the talents of our educators and the media wizardry of Madison Avenue, which has proven so successful in selling products ranging from detergent to political candidates, can be harnessed to graphically present the evils of drugs.

123. See Corcoran, *Legalizing Drugs: Failures Spur Debate*, N.Y. Times, Nov. 27, 1989, at 9, col. 4; *Federal Judge Urges Legalization of Crack, Heroin and Other Drugs*, N.Y. Times, Dec. 13, 1989, at 1, col. 5. See generally Nadelmann, *The Case for Legalization*, 92 PUB. INTEREST 3 (1988).

124. Of course, this is not true for everyone. Cognitive awareness does not always lead to behavioral change. See, e.g., Atkin, *Research Evidence on Mass Mediated Health Communication Campaigns*, in COMMUNITY YEARBOOK 3, at 655, 656 (D. Nimmo ed. 1979); Farquhar, Maccoby & Solomon, *Community Applications of Behavioral Medicine*, in HANDBOOK OF BEHAVIORAL MEDICINE 437, 460 (W. Gentry ed. 1984). Indeed, as the experience with AIDS and tobacco illustrate, people sometimes act imprudently even though they know better. See A. BANDURA, *supra* note 12, at 181. As a result, education alone, although it will succeed in preventing drug abuse for many people, will not do so for all. In any event, the potential of educational programs can be enhanced through use of the wagering approach.

Only here, the facts—and nothing but the facts—should do; we should avoid the moralizing, hyperbole, exaggeration, and distortion that often have characterized both media advertising and our drug education programs in the past, and that only undermine our credibility. Armed with the facts, many of our children will learn to say no to drugs, just as many millions of Americans have quit or avoided smoking and reduced their consumption of high-cholesterol foods in the face of increased information concerning the health risks these habits present.¹²⁵ Not all people will heed the warning and steer clear of addicting drugs. Not all people are rational. But for those who are, the anticipatory punishment of a life of addiction made easy to visualize should serve as a sufficient aversive conditioner to make them exceedingly wary of experimenting with dangerous drugs, and even more reluctant to use them habitually.

The focus of prevention programs should thus be on getting the message across as plainly and effectively as possible, in the earnest hope that people will listen. The governmental wager can help to achieve this goal. The reward for attendance and successful completion of such an educational program could be a modest financial sum—for example, twenty-five or fifty dollars, a ticket to a desired sporting event, a coupon redeemable at a local record store, reduced rates for auto insurance, or other imaginative possibilities based on the incentive preferences of the target group. Indeed, we could present students with a menu of possible rewards and let them select those that would most effectively motivate them. Penalties similarly could be financial or otherwise—for example, the loss of a school privilege, higher rates for auto insurance, etc. No one should be required to accept the proposed wager as a condition of taking such prevention programs, which should be as widely available as possible. Students and others would be free to participate in such programs with or without the wager, as they may choose. They should be advised that the wager is purely voluntary, and no pressure to participate should be applied.

For drug treatment, similar wagering schemes could be devised. The government would like to convince heroin or cocaine addicts to kick their habits. The principal difficulty usually is motivation, as a number of drug treatment techniques presently exist that have been used successfully by those motivated to stop using drugs. Inner-city addicts with no job or family may experience few immediate social

125. See Becker & Murphy, *supra* note 118, at 687; Ippolito & Ippolito, *Measuring the Value of Life Saving from Consumer Reactions to New Information*, 25 J. PUB. ECON. 53 (1984); Schwartz, *supra* note 118, at 538.

rewards for becoming drug abstinent, and few immediate social punishments for continuing their drug use. Unless the requirements of continued drug use become more painful than the drug is reinforcing, or unless users become convinced that the long-term benefits of abstinence exceed the short-term costs, these addicts will not enter treatment. A government offer to wager with the addict can be used to restructure the behavioral contingencies of drug use, providing social rewards for entering and successfully completing treatment and social punishments negotiated in advance for failure to meet program goals. Under the offer to wager, if the drug addict can stay off drugs for a specified period of time, say six months, he will receive a particular sum, say five hundred or one thousand dollars, or some other agreed-upon non-monetary reward.¹²⁶ The government would require the addict to deposit the equivalent amount (or some negotiated portion of it) in advance which would be forfeited if the goal is not achieved, so that failure not only will deny the addict the reward, but also will result in his incurring an agreed-upon loss.¹²⁷ In the alternative, a

126. In view of the powerful reinforcement that the pharmacological effects of drug-taking provide, the wagering program will need to use strong competing reinforcers for addicts who are not highly motivated to give up their addiction. See Magura, Casriel, Goldsmith, Strug & Lipton, *supra* note 39, at 117. Compare Beatty, *supra* note 39, at 522 (reporting lack of success in a contingency contracting experiment in which only weak reinforcers, such as a daily pass to leave the ward, were available) with Anker & Crowley, *Use of Contingency Contracts in Specialty Clinics for Cocaine Abuse*, in PROBLEMS ON DRUG DEPENDENCE 452 (L. Harris ed. 1982) (avoidance of notice of drug use to drug abuser's employer successfully employed as reinforcer); Boudin, *supra* note 39 (control of client's finances through jointly administered bank accounts, post-dated client check payable to client's most despised organization, privilege of continued contact with client's son used as reinforcers); Crowley, *Contingency Contracting Treatment of Drug-Abusing Physicians, Nurses, and Dentists*, in BEHAVIORAL INTERVENTION TECHNIQUES IN DRUG ABUSE, *supra* note 113, at 68 (loss of professional license successfully used as reinforcer); Dolan, Black, Penk, Robinowitz & DeFord, *supra* note 39 (successful use of detoxification from methadone treatment as reinforcer); and Polakow & Doctor, *A Behavioral Modification Program for Adult Drug Offenders*, 12 J. RES. CRIME & DELINQUENCY 63 (1974) (reduction in time on probation used as reinforcer).

On the other hand, the selection of reinforcers that are *too* strong or penalties that are too severe could lead to a different problem—the “overjustification effect”—in which the extrinsic reinforcer or penalty becomes more salient to the individual than the internal reinforcer, thereby making it unlikely that intrinsic motivation will be triggered, or undermining any existing such motivation. See *supra* notes 99-100 and accompanying text. If the reward for successful performance of the wager is too great, or the penalty for unsuccessful performance too severe, there is danger that the individual will accept the wager and perform successfully—remaining drug-free for a period—only in order to obtain the reward, or avoid the penalty, and will realize no lasting positive changes in behavior. What is too great a reward or severe a penalty will vary with the context and incentive preferences of the individual whose behavior the program seeks to change. Much clinical sensitivity is therefore needed in the selection of the reinforcers so that they are neither too weak to spark success nor too strong to produce the “overjustification effect,” and the penalties so that they are not so severe that they are deemed coercive, thereby provoking a similar effect. See C. KIESLER, *supra* note 87, at 167.

127. Because, under the wagering proposal advanced here, the government will either

non-monetary penalty could be negotiated.¹²⁸

Under this contingency contract, urinalysis, or other types of drug testing administered periodically, would be used to establish whether the addict has won the wager, in which case he will receive the amount in question, or has lost the wager, in which case the government will retain the amount deposited or the individual will suffer

operate or fund the wagering program, there may be concern that the individual agreeing to participate in the program would run the risk of self-incrimination for past drug involvement. Moreover, the individual may be concerned that, should he participate in the wager but fail to succeed, his failure might make him the target of future criminal investigation. Obviously these concerns could discourage participation in the program. Such concerns, however, seem largely unfounded. First, prosecutors with inevitably limited resources tend to focus their drug enforcement efforts against sellers or importers of illegal drugs. Although some defendants arrested for drug offenses are also charged with possession of illegal drugs, they are usually suspected of sale or possession with intent to sell. Moreover, drug use alone is not always a crime. Although an admission of past drug use is obviously also an admission of past possession of illegal drugs, it is simply not the practice of prosecutors to charge individuals with the crime of drug possession for past use alone, at least in the absence of a seizure of at least some quantity of the drugs so that they may be chemically evaluated to prove that they were indeed illegal drugs.

In addition, the proposed wagering program is a therapeutic one, and it will most likely involve, in at least a supervisory role, some clinician who will be required to respect the confidentiality of the relationship with his patient under state evidence law. All employees working under the supervision of such a clinician will also be bound by this requirement of confidentiality. State evidence law typically accords patients of physicians, psychologists, and sometimes other clinicians, a privilege against the admission in judicial proceedings of evidence concerning any communications of a confidential nature within the therapeutic relationship. Because, in entering the wager, the patient is voluntarily entering into what amounts to a therapeutic relationship, the patient's communications, including the fact of his participation in the program, should be covered by this privilege. In addition to the evidentiary privilege, clinicians have an ethical responsibility to respect the confidentiality of communications with their patients that is an important canon of professional conduct.

In order to insure the protection of confidentiality in a wagering program for drug addicts, or for other populations involved in criminal activity, wagering programs should adopt protocols governing confidentiality. Obviously these issues have already been faced by existing government operated or funded drug treatment programs, such as methadone maintenance programs for patients addicted to the illegal drug heroin. In New York City, the Health Department operates a methadone program and provides strict protection of confidentiality for this very reason. Indeed, when the police, in investigating a crime occurring outside a methadone clinic, subpoenaed the photographs of patients in the program, Doctor Robert Newman, then director of the Department's methadone program, resisted the subpoena, asserting a doctor-patient privilege. Although the court ultimately rejected application of the privilege because it found the photographs to be an aspect of the program's intake administration rather than the patient's treatment, it suggested that facts not otherwise available about the patient that relate more directly to the patient's treatment would be subject to the state privilege. See *People v. Newman*, 32 N.Y.2d 379, 298 N.E.2d 651, 345 N.Y.S.2d 502 (1973), *cert. denied*, 414 U.S. 1163 (1974) (finding, however, that the confidentiality provision of the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970 (42 U.S.C. § 242a(a) (1970)) applied).

128. For a number of non-economic penalties that have been successfully used in contingency contracting programs with drug addicts, see *supra* note 126. See also D. MEICHENBAUM & D. TURK, *supra* note 33, at 177-79 (discussion of negative reinforcers).

the agreed-upon non-monetary penalty. The addict may have a constitutional right to avoid such drug testing, at least if he is not employed in certain occupations.¹²⁹ But he would be required to execute a waiver of this right as an express condition of the contract, after full disclosure and ample time for contemplation and consultation.¹³⁰ Indeed, such opportunity for consultation would be an important ingredient of the program's ability to generate individual change. Those interested in considering a wager with the government would first be required to meet with a counselor, who would perform an intake function like one done in a social service program worthy of the name, but without the offensive paternalistic attitude that too often has taken hold in public programs. The intake counselor would provide information on the general rules of the wager and the areas that would be open to negotiation if the individual was interested in pursuing the matter, and on various alternative options open to the individual, such as the public and private social, health, employment, and legal programs available, their requirements, and how to obtain their services. Information alone may meet the individual's needs, and referral to other programs, including help in scheduling appointments, could be an invaluable, and in some cases necessary, step to rehabilitation. No pressure should be exerted in any particular direction, although suggestions could be made when they are sought. Such pressure, or the air of paternalism, could easily contribute to erecting a wall of distrust and suspicion. Access to attorneys also could be provided, perhaps even an independent attorney on the staff of or reimbursed by the program, who would be the agent of the individual and not of the program. The attorney can serve as a valuable ally in solving the individual's social problems, including his legal problems. Drug abusers, in particular, are likely to have a variety of interrelated problems—employment, criminal, and family—many of which have significant legal components. The counselor should have a similar ability to refer the individual to needed psychological, health, and employment counseling, which, again, could be furnished by independent professionals employed or reimbursed by the governmental wagering program. The intake portion of the wagering program can thus serve an important social work service, functioning to the addict community much like a settlement house of old. Indeed, the program, by attracting interest in those who ordinarily would reject

129. See *Skinner v. Railway Labor Executives' Ass'n*, 109 S. Ct. 1402 (1989); *National Treasury Employees Union v. Von Raab*, 109 S. Ct. 1384 (1989).

130. For an analysis of the validity of such a waiver, see *infra* notes 234-37 and accompanying text.

assistance, can serve an important outreach function, enabling other existing services to be utilized more widely.

For those deciding to pursue further discussions about entering a wager, the various kinds of counseling available could play an important role in insuring that the wager was entered into voluntarily, and not as a product of misunderstanding, duress, or other form of coercion. The intake counselor, or some other specialist, would negotiate the terms of the wager based on the individual's preferences, abilities, and condition. The agreement would then be written in plain language and presented to the individual for consideration. Ample time should be allowed for further consultation at this time, again helping to assure that the benefits of individual choice are engaged, unimpeded by the potential for negative "psychological reactance" that the feeling that one is being coerced into treatment could trigger.¹³¹ The consultation process could help the individual to form a support group, composed of family, friends, and counselors, to help him through the difficult times that will follow. The signing of the wagering agreement also should be accompanied by a degree of formality, perhaps including the requirement that his signature be witnessed by members of the support group. His signature in their presence constitutes the public acceptance and announcement by him that he is committed to the goal, thereby engaging a number of psychological mechanisms that can help bring it about.¹³² Signing as witnesses also can mobilize the members of the individual's support group to help him meet the goal.

The reinforcer to be used—which the individual will receive for meeting the goal or certain intermediate goals—should be carefully negotiated. It should be sufficient to spark the individual's interest and motivation, but not of such a magnitude as to provide an inducement that the individual will find irresistible. The correct balance is necessary in order to minimize the potential that the individual is entering into the wager primarily to receive the "reward" rather than to accomplish genuine change. Monetary reinforcers could be used, but the creative use of non-monetary reinforcers could be even more effective. The reinforcer could be paid at completion of the goal, or, alternatively, a portion of the reward could be paid weekly or monthly, or even variably, should the results of periodic drug testing show that the individual has remained drug-free for the period in question, with the remainder of the sum wagered becoming payable at the end of the specified period.

131. See S. BREHM & J. BREHM, *supra* note 101.

132. See *supra* notes 85-89 and accompanying text.

The addict is thus provided a cash or other non-monetary incentive, one that he chooses to attempt to gain at a time when he is ready to do so, and his resolve to accomplish the goal is maintained by making him bear at least a portion of the economic costs of his failure. The costs of periodic drug testing will be borne by the government if the addict ultimately succeeds in staying drug-free for the specified period of time, or by the addict if he fails to succeed, either fully or partially, out of the amount wagered. The government would not be "betting against" the addict, as it might appear. If the addict wins the bet, everyone wins. Eliminating or reducing the social costs of drug addiction would be well worth the price. The government would be offering to wager with the addict as an expression of caring, in effect saying to the addict, "Let us help you with this problem, if you would like our help, by setting up this wager which we think will facilitate your achieving this goal that we both would like to see achieved. We think we can help you to succeed by giving you an additional stake in your success and by making you absorb some of the costs of your failure. But whether you choose to participate is entirely your decision. We can only offer help; success or failure is ultimately up to you."

Obviously such an offer to wager by the government will not cure the scourge of drug addiction. Indeed, drug addiction might seem to be an unlikely candidate for the successful application of the wagering approach in view of the potency of the drug as a competing reinforcer. However, although it will not work for everyone, the wager might tend to help motivate some addicts to rid themselves of their drug habits, and to succeed in accomplishing the goal. Many addicts know they should quit taking drugs, and that ultimately they will need to do so. Few would wish for life as a drug addict. Yet, they temporize. The marginal costs of each additional "high" seem small, particularly for those who are myopic concerning the future. Perhaps the wager can attract some of them into attempting to quit who would otherwise continue to use drugs and to postpone, one day at a time, the decision to stop.

We may not have the resources to treat all addicts, at least not all at once. Public resources are always limited, and there are many competing claims. Allocating these scarce resources based on the motivation of the addict to end his habit makes considerable sense. We are much more likely to succeed with those who are motivated. An allocation on the basis of motivation would produce a more effective and efficient use of our limited public resources. Moreover, the success of those addicts sufficiently motivated to accept the wager can

be infectious. Other addicts, seeing their former fellows succeed, may realize that there is a way out of their problem, and may be motivated to follow in their footsteps. In effect, those who succeed may become role models for the others, who, by observing the successful ones earn the rewards of the wager (and of a life free of drugs), will themselves experience a form of vicarious reinforcement.¹³³ For those uninterested in being rescued from their drug problem, our options may be limited. Some people like to swim in shark-infested waters. We can erect large signs warning them of the perils. We can build better and better life preservers, and learn to throw them closer and closer to those who jump in despite the warnings. But unless they want to grab on and help pull themselves into the lifeboat, there may be little we can do, at least without sufficient resources to jump in and pull each one out without his help.

Not everyone who succeeds in the wager will remain off drugs in the future. Being drug free for a period of six months, however, may itself be reinforcing.¹³⁴ In addition, behaving in a drug-free manner for a period of time may set in motion forces that can bring about attitudinal change concerning drugs. Attitudinal change, which is essential for drug-abstinent behavior to take hold, is most likely to occur when the period of abstinence is induced by reinforcement that is not so strong that the individual feels that his behavior is the product of external pressure, but rather is a behavior pattern that he has freely chosen. The addict's perception that he has chosen to be drug-free will create feelings of dissonance with his former attitudes about drug-taking, thereby beginning the process of attitude change that is essential for lasting benefits.¹³⁵ At the least, a period of drug-free behavior can be an important beginning, one that the addict, perhaps with additional help from the government or family and friends, can build on in the effort to accomplish his ultimate goal of ending his addiction. As an additional reinforcer, those successfully completing a treatment program could be given preferential access, at no or reduced cost, to job training, educational programs, or psychological counseling. In this way, we can attempt to build patterns of reinforcement into the ex-addict's life so as to minimize the risks of backsliding.¹³⁶ The social gains of even partial victories would be considerable

133. See A. BANDURA, *supra* note 12, at 284-86, 301-03.

134. The "escape from an increasingly punishing cycle of drug procurement and use in his natural environment" will provide an added reinforcement for at least some period. Beatty, *supra* note 39, at 522.

135. See R. PETTY & J. CACIOPPO, *supra* note 89, at 144; Festinger & Carlsmith, *supra* note 99.

136. For discussions of relapse prevention and a self-control program used to teach addicts

and the social costs negligible.

This incentive/disincentive system would operate against the backdrop of existing drug treatment programs and any new techniques that might emerge. The addict would be free to choose any drug treatment program he wished, a private or public one, or none at all. The results alone, measured by periodic drug testing, would determine the outcome of the wager. The superiority of one type of drug treatment over another has not yet been demonstrated. It may be that desire to change is the most important ingredient in success, and that once that desire is present, any treatment will do equally well.¹³⁷ Indeed, a strong desire to change can be sufficient even in the absence of treatment, as evidenced by the success many addicts have experienced without therapy. The offer to wager is designed to stimulate such a desire to change, to convert such desire to commitment, and to help maintain such commitment during the difficult times that must precede success.

Allowing the addict to choose the drug treatment program he wishes, rather than having the government dictate a particular program for him, can itself be therapeutic. The potential for successful treatment in a variety of contexts is increased when the individual accepts treatment voluntarily rather than through coercion.¹³⁸ Individuals coerced to participate in a treatment program—for example, by court order; as a condition of diversion, probation, or parole; or by correctional authorities—often just go through the motions, satisfying the formal requirements of the program without deriving any real benefits.¹³⁹ Coercion also may be self-defeating, producing a negative “psychological reactance” in the individual that produces failure.¹⁴⁰ The voluntary choice of a treatment program, on the other hand, involves a degree of internalized commitment to the program that

how to anticipate and cope with the problem of relapse, see G. MARLATT & J. GORDON, *RELAPSE PREVENTION: MAINTENANCE STRATEGIES IN THE TREATMENT OF ADDICTIVE BEHAVIORS* (1985); D. MEICHENBAUM & D. TURK, *supra* note 33, at 194-202; Marlatt & George, *Relapse Prevention: Introduction and Overview of the Model*, 79 *BRIT. J. ADDICTION* 261 (1984). The program can adapt the wagering technique for dealing with relapse problems.

137. Schwartz, *supra* note 118, at 537-38.

138. See P. APPELBAUM, C. LIDZ & A. MEISEL, *supra* note 90, at 28; N. MORRIS, *THE FUTURE OF IMPRISONMENT* 24 (1974); Winick, *supra* note 105, at 353, 360-61, 422; Winick, *Restructuring Competency to Stand Trial*, 32 *UCLA L. REV.* 921, 980 (1985).

139. See COMMITTEE ON PSYCHIATRY AND LAW OF THE GROUP FOR THE ADVANCEMENT OF PSYCHIATRY, *PSYCHIATRY AND SEX PSYCHOPATH LEGISLATION: THE 30S TO THE 80S*, at 889 (1977); AMERICAN FRIENDS SERVICE COMM., *STRUGGLE FOR JUSTICE: A REPORT ON CRIME AND PUNISHMENT IN AMERICA 97-98* (1971); Winick, *supra* note 105, at 331, 344-46, 353-54; Winick, *The Right to Refuse*, *supra* note 50, at 83-87.

140. See J. BREHM, *A THEORY OF PSYCHOLOGICAL REACTANCE* (1966); S. BREHM & J. BREHM, *supra* note 101.

often will not be present when it is imposed involuntarily.¹⁴¹ Research in a variety of contexts—involving children in treatment, students in school, and medical and mental patients—supports the value of individual choice in increasing performance.¹⁴² One study showed that college students, assigned to perform a task, performed better when given choice in selecting strategies for goal achievement.¹⁴³ Accordingly, addicts entering the proposed wager with the government should be offered a variety of drug treatment programs and allowed to choose which, if any, they would like to take advantage of. Similarly, if resources allow, the government, on a purely voluntary basis, could offer to perform a behavioral inventory of the addict to assist him in understanding the environmental structures in his life that perpetuate his drug-taking behavior, and how to rearrange them to reduce or remove the social contingencies that encourage and maintain his drug habit. The addict should be free to accept or reject any suggestions made. Such a behavioral inventory could present an important therapeutic and social assistance opportunity for the addict, who, if this has not already occurred during the intake or negotiation phase, could be directed (again on a voluntary basis) to a variety of appropriate services, such as job training, employment opportunities, occupational counseling, housing, educational programs, health services, and legal services. Indeed, the government could provide an incentive for participation in some or all of these programs by offering discounts, scholarships, priority acceptance or placement, or other inducements.

As a hedge against abuse by non-addicts trying to cash in on a sure bet, the government could insist on a documented history of addiction in the period immediately preceding the making of the wager as a condition for its acceptance. Some safeguards of this kind would be necessary to avoid the self-defeating effect of having the government's offer to wager induce the very behavior it is designed to eliminate. Perhaps candidates for the wager could be selected from those already on waiting lists for other drug treatment programs. An intake evaluation by an appropriate clinician also would minimize the potential for abuse.

A public agency could administer the governmental wagering program. The task could be assigned either to the agency principally concerned with solving the particular problem (the Addiction Serv-

141. See *supra* notes 91-92 and accompanying text.

142. See *supra* notes 93-95 and accompanying text.

143. Earley & Kanfer, *The Influence of Component Participation and Role Models on Goal Acceptance, Goal Satisfaction, and Performance*, 36 ORGANIZATIONAL BEHAV. & HUM. DECISIONAL PROCESSES 378, 387 (1985).

ices Agency or Health Department) or to an agency established to administer governmental wagering generally (compare, for example, New York's Off-Track Betting Corporation), or by private concerns through a purchase-of-services arrangement with the relevant governmental agency. This program, which could also administer wagers in other areas, could emerge as an effective social services agency in its own right.

B. *The Problem of the Unproductive Civil Servant*

Another application of governmental wagering to accomplish public goals can be illustrated by the costly problem of the unproductive civil servant. Budgetary cutbacks and taxpayer discontent have fueled increasing concern with lack of productivity in the public sector.¹⁴⁴ After a period of probationary employment, civil service protection gives the overwhelming majority of government employees job security in the form of protection from discharge absent specified cause.¹⁴⁵ The employment-at-will doctrine, which civil service protection replaced in the public sector, had produced many abuses. The major concern was political patronage, the practice of filling government jobs with the appointing official's political cronies. Under the patronage system, which began during the presidency of Thomas Jefferson and flourished during that of Andrew Jackson, public employment was regarded as a privilege, and employees served at the hiring official's discretion. Although, following the Civil War, grass roots sentiment began to grow for civil service reform, it was not until President James Garfield was assassinated by a disgruntled and dejected job seeker that Congress responded by passing the Pendleton Act of 1883, establishing the Civil Service Commission (now known as the Office of Personnel Management).¹⁴⁶ The Act sought to replace

144. See Jarrett, *An Overview of Productivity Improvement Efforts in State Governments*, 14 PUB. PERSONNEL MGMT. 385 (1985); Wakham, *Productivity Improvement for Public Sector Managers: A Federal Perspective*, 14 PUB. PERSONNEL MGMT. 333 (1985).

145. In a 1978 analysis, a Senate Committee estimated that there were 2.9 million civil employees on the federal payroll, of whom 93% were subject to civil service protection. S. REP. NO. 969, U.S. SEN. GOV'T AFFAIRS COMM., 95th Cong., 2d Sess. 2 (1978), reprinted in 1978 U.S. CODE CONG. & ADMIN. NEWS 2723, 2723-24 [hereinafter S. REP. NO. 969]. The current statutory provision, as did its predecessors, prohibits the suspension or removal of such employees except "for such cause as will promote the efficiency of the service," which must be demonstrated at an administrative hearing. Civil Service Reform Act of 1978, 5 U.S.C. §§ 7503(a), 7513(a) (1988). Federal, state, and local governments combined are estimated to employ 15.7 million public employees, representing 17% of the nation's non-agricultural civilian labor force, over 82% of whom are state and local employees. Note, *Developments in the Law: Public Employment*, 97 HARV. L. REV. 1611, 1614 (1984).

146. The history is recounted in *Arnett v. Kennedy*, 416 U.S. 134, 148-50 (1974), upholding the validity of the procedural protections afforded by the Act and its successors against a due-

patronage with merit selection and to insulate employees from discharge for political or other inappropriate reasons.¹⁴⁷

The civil service model, now widely adopted by state and local governments, affords a significant measure of job security to those accepting public employment, often for their entire careers and at wages generally lower than those prevailing in the private sector. Civil service reform undoubtedly produced many benefits: the reduction of political patronage; the prevention of abuses by government officials in the exercise of their virtually unfettered discretion to discharge employees (and in the exercise of the enormous power over their lives that this brought); the provision of economic and psychological security to government workers; and the increased ability of the government to recruit and retain high quality employees.

On the other hand, civil service protection has resulted in a lack of productivity by some public employees, particularly those at lower levels.¹⁴⁸ Although many civil servants are dedicated and industrious, many are not. Once they complete their probationary period, the need of these employees to impress supervisors diminishes, both because suspension and discharge are difficult,¹⁴⁹ and because wage increases often are automatic, based on length of service or the rate of inflation, rather than on merit.¹⁵⁰ Many become clock watchers, wait-

process attack by civil servants facing discharge, and *Elrod v. Burns*, 427 U.S. 347, 353-54 (1976), placing first amendment limitations on patronage dismissal. For more extensive treatments, see C. FISH, *THE CIVIL SERVICE AND THE PATRONAGE* (1905); D. HARVEY, *THE CIVIL SERVICE COMMISSION* (1970); W. NELSON, *THE ROOTS OF AMERICAN BUREAUCRACY, 1830-1900*, at 119-33 (1982); P. VAN RIPER, *HISTORY OF THE UNITED STATES CIVIL SERVICE* (1958); Frug, *Does the Constitution Prevent the Discharge of Civil Service Employees?*, 124 U. PA. L. REV. 942, 947-77 (1976); and Note, *supra* note 145, at 1619-32. The Pendleton Act of 1883, ch. 27, 22 Stat. 403, was amended by the Lloyd-Lafollette Act of 1912, ch. 389, § 6, 7 Stat. 555, and most recently was amended by the Civil Service Reform Act of 1978, Pub. L. No. 95-454, 92 Stat. 1111 (currently codified as amended at 5 U.S.C. § 7501 (1988)); see Note, *supra* note 145, at 1632-50.

147. "The civil service system is the product of an earlier reform, which, in protest against the 19th century spoils system, promised a work force in which employees were selected and advanced on the basis of competence rather than political or personal favoritism." S. REP. NO. 969, *supra* note 145, at 2-3, 1978 U.S. CODE CONG. & ADMIN. NEWS at 2725.

148. "Many managers and personnel officers complain that the existing procedures intended to assure merit and protect employees from arbitrary management actions have too often become the refuge of the incompetent employee." *Id.* at 3, U.S. CODE CONG. & ADMIN. NEWS at 2725.

149. "It is relatively easy to discharge an unsatisfactory employee during the first year of service (probationary period). After an employee has completed the first year of service, though, existing law provides that an individual may be removed only for such cause as will promote the efficiency of the service . . ." *Id.* at 9, 1978 U.S. CODE CONG. & ADMIN. NEWS at 2731.

150. See *id.* at 3, 1978 U.S. CODE CONG. & ADMIN. NEWS at 2725 ("[T]he system's rigid procedures provid[e] almost automatic pay increases for all employees . . .").

ing for 5:00 p.m. so they can go home. Many care little about accomplishing more than the minimum required by the custom of the office, which through peer pressure is kept rather low. In addition to performing the bare minimum, many take full advantage of sick leave, treating each day of sick leave to which they are entitled as paid vacation. Civil service employees in some agencies are notoriously inefficient and unproductive, and there is little that supervisors can do about it, given the difficulties of firing or disciplining those with civil service protection.¹⁵¹ The resulting tolerance of incompetency and inefficiency inevitably reduces the morale of the entire office, diminishing the performance even of dedicated workers.¹⁵²

The discrepancy in productivity and efficiency between the public sector and private industry generally is enormous. This is not surprising. In private industry, where the employment-at-will doctrine still predominates and salary increases are more often based on merit,

151. A widely held impression is that a government employee cannot be fired, regardless of unacceptable conduct or work performance. Although this is untrue enough bad examples are available to give it credibility. But while it is technically possible to fire unsatisfactory employees, appeals processes are so lengthy and complicated that managers often avoid taking disciplinary action. . . . [T]he number of employees actually removed because of unsatisfactory job performance as distinguished from misconduct is relatively small Managers embroiled in appeals often find that these processes consume all of their time and attention. Some managers simply avoid taking necessary steps to discipline or discharge employees in the first place. They find ways to work around unsatisfactory employees, or they hope the employees will go elsewhere to work. *Id.* at 9-10, 1978 U.S. CODE CONG. & ADMIN. NEWS at 2731-32.

152. "When incompetent and inefficient employees are allowed to stay on the work rolls, it is the dedicated and competent employee who must increase his workload so that the public may be benefitted. The morale of even the best motivated employee is bound to suffer under such a system." *Id.* at 3, 1978 U.S. CODE CONG. & ADMIN. NEWS at 2725. Moreover, competent employees, by observing the unproductive and inefficient behavior of their fellow workers, and the fact that this behavior is reinforced by the system, will themselves learn to behave inefficiently. See A. BANDURA, *supra* note 12, at 290-91 (explaining this phenomenon in terms of social learning and modeling theory). Not only will competent employees thus learn the ways of their unproductive role models, but observing the unproductive employees being compensated at the same level for less or inferior work will further reinforce inefficiency. Such observations will engender the feeling on the part of the productive workers that they are being inequitably compensated, which will in turn lead them further to reduce the level or quality of their performance. *Id.* at 306.

Of course, for the same reasons, if the wages and other job benefits and privileges of productive employees remain unrelated to job performance while the rewards of the wager are available to their less productive co-workers, the productive workers may be encouraged to decrease their productivity to become eligible for participation in the wager. In order to avoid this perversion of the wagering program's intended incentive system, supervisors will have to be sensitive to the need to reward productive workers, at least on a variable basis, in order to reinforce their good job behavior and to avoid this potential disincentive to its continuation. A bit of praise or encouragement may suffice to motivate many employees to continue their good work habits. See, e.g., R. PETTY & J. CACIOPPO, *supra* note 89, at 170; Luthans, Paul & Baker, *supra* note 97, at 319.

there are direct financial incentives for employees to be productive and efficient, and corresponding disincentives to perform poorly. Although it has accomplished other benefits, civil service protection has lessened or eliminated many of the incentives and disincentives that relate so closely to job performance. When salary and other employee benefits are provided on a non-contingent basis, rather than tied to performance, behavioral psychology teaches that performance inevitably will suffer and existing patterns of mediocrity will be reinforced and strengthened.¹⁵³

Not only is the resulting lack of productivity bad for government, whose ability to deliver services is already under intense pressures as a result of the budgetary problems that most government entities face, but it is also psychologically debilitating for the employees. Clock watchers doing the bare minimum come to regard their jobs as meaningless rituals. Lacking a sense of achievement or craft in their work, they suffer a loss of self-esteem. For many, their sense of alienation from work and life must be unbearable.

To attempt to break up this pattern, the government could offer to wager with at least the more unproductive civil servants to increase their job productivity. Management-by-objectives scales could be used to define and measure employee output, and goals could be set for increased productivity over stated periods, say ten percent more birth certificate applications processed in a two-month interval over the preexisting baseline. Employees could be offered a wager under which they would deposit a particular sum, say \$250, and agree to try

153. See *supra* note 82 and accompanying text. An additional problem related to non-contingent reinforcement that also produces complacency and lack of motivation among workers due to insufficient incentives occurs when workers' efforts are pooled. "Social loafing" theory has shown that individuals who work together generate less effort than when they work alone. See Szymanski & Harkins, *Social Loafing and Self-Evaluation with a Social Standard*, 53 J. PERSONALITY & SOC. PSYCHOLOGY 891 (1987). Not only do such pooling arrangements limit the ability of workers to obtain individual feedback, but they also prevent supervisors from evaluating individual performance, thereby diminishing the reinforcing effects of praise and criticism. *Id.* at 891 ("[I]ndividual outputs were 'lost in the crowd,' and participants could receive neither credit nor blame for their performance."). Like the provision of non-contingent reinforcement, employee pooling structures interfere with the effects of reinforcement that are an important ingredient in assuring productivity in more typical private-sector work settings. Behavioral theory would predict that productivity will increase if these interferences with the effects of reinforcement are reduced by making workers' individual accomplishments more visible and rewarding those accomplishments through contingent reinforcement.

These insights argue for a broad restructuring of civil service protection. Perhaps civil service practices could be restructured to increase the provision of compensation on a merit basis in order to increase productivity. This as well as other more radical changes in civil service protection may, however, be politically unfeasible. In any event, the wagering approach suggested here may be attempted even within the context of a structurally unchanged system.

to accomplish the target goal. Programs to provide job training or counseling could be made available to employees on a voluntary basis to help them achieve the goal, if they wish such help. Successful employees would receive a \$250 payoff and the return of the \$250 that they deposit; unsuccessful ones would forfeit the \$250 amount deposited. Perhaps non-monetary reinforcers, such as a desired ticket to a particular sporting event, concert, or play, an expense-paid vacation, extra time off, or a bigger desk or office could be negotiated and would be more effective. Alternatively, the government could use a system of variable reinforcement in which the wager would provide monetary or non-monetary reinforcement at unpredictable, variable occasions when employees reach goals, rather than every time an employee reaches a goal or intermediate goal, creating a "jackpot" effect that may increase motivation even more than would reinforcement provided at regular intervals.¹⁵⁴ In selecting which work goals should be subject to the wager and which reinforcers and penalties should be used, managers should be sensitive to the "overjustification effect."¹⁵⁵ The offer of a reward for a behavior that the individual already regards as enjoyable, or use of too great a reward (or too severe a penalty), can have the effect of undermining intrinsic motivation or reducing the potential that such motivation will take root, thereby decreasing the likelihood that the behavior will be performed under subsequent nonrewarding conditions.¹⁵⁶

Participation in the wager would be purely voluntary. Not all civil servants will agree to participate, of course, but some will. Those who do—to obtain extra compensation or a desired non-monetary reinforcer, because they like a challenge, or simply because they like game playing—will likely succeed, to the benefit of both the government and themselves. Accomplishing the goal will probably increase job morale and bring added self-esteem in addition to the negotiated financial or non-financial reward, which will itself reinforce good work habits and productivity. Of course, some workers may not maintain their productivity after incentives are withdrawn because they have come to view the extra work they have begun doing pursuant to the wagering program as deserving of extra pay or other benefits.¹⁵⁷ Hopefully, however, the added self-esteem and self-efficacy, as well as the continued approval of supervisors, will prevent backslid-

154. See *supra* note 70 and accompanying text.

155. See *supra* notes 99-100 and accompanying text.

156. See *supra* notes 99-100 and accompanying text.

157. See *supra* note 126 (discussing the "overjustification effect").

ing.¹⁵⁸ By setting and accomplishing performance goals, workers will increase skills and acquire and progressively improve strategies for job success. Workers who had stagnated will again experience a sense of learning in their work. Eventually, they may even experience a sense of pleasure in their craft and pride in their work that they never had imagined. These increased feelings of self-efficacy stimulated by success in the wager can make productivity self-reinforcing, leading to its continuation even beyond the time when the external rewards of the wager are available. Moreover, if the individual attributes his efforts to a choice he has freely made rather than to one produced by external pressure, a period of increased productivity will stimulate feelings of dissonance with his former non-productive attitude, which can push in the direction of positive attitude change.¹⁵⁹ Indeed, the contingency arrangement should be structured so that the perception of external pressure is minimized and the individual can feel that his participation and performance were freely chosen and that he is responsible for his own behavior.¹⁶⁰

In addition, successful completion of the goals set by the wager will inevitably increase the performance standards prevailing in the particular office, affecting the productivity of all. Even those employees declining to participate in the wager may benefit from observing those who do so, acquiring adaptive responses and skills through modeling, increasing their own motivation and performance as a result of vicarious reinforcement, and learning the basic lesson that hard work pays off.¹⁶¹

C. *The Welfare System*

There is widespread agreement that the existing welfare system offers incentives not to work, but instead to subsist on welfare payments.¹⁶² Although half of welfare recipients receive subsistence pay-

158. See R. PETTY & J. CACIOPPO, *supra* note 89, at 170; Luthans, Paul & Baker, *supra* note 97, at 319.

159. See *supra* note 135 and accompanying text.

160. See C. KIESLER, *supra* note 87, at 164-65, 167.

161. See *supra* note 32 and accompanying text (modeling); and A. BANDURA, *supra* note 12, at 284-86, 301-03 (vicarious reinforcement).

162. See Stevens, *The Welfare Consensus*, N.Y. Times, June 22, 1988, at A1, col. 5. The largest and most controversial cash public assistance program, indeed the central pillar of the American welfare system, is Aid to Families with Dependent Children (AFDC), formerly known as Aid to Dependent Children. See Act of July 25, 1962, Pub. L. No. 87-543, 76 Stat. 185 (codified as amended at 42 U.S.C. §§ 602-15 (1988)). The Act creates a system of federal grants to the states for local assistance programs administered by the states subject to federal statutory and regulatory restrictions and the supervision of the Secretary of Health and Human Services. For an overview of the program, see S. LEVITAN, PROGRAMS IN AID OF THE POOR FOR THE 1980's (3d ed. 1980). For an historical account, see Lurie, *Major Changes*

ments only temporarily, in response to a onetime misfortune, the other half are "mired in a pattern of permanent dependency."¹⁶³ By rewarding idleness with cash benefits and providing a disincentive to employment—the loss of benefits—the welfare system applies psychological theory perversely, reinforcing and maintaining the dependency of recipients. The children of welfare mothers frequently grow up without the education and skills necessary to become self-sufficient citizens and workers, and without the incentives to acquire such skills. And their children grow up the same way, perpetuating a cycle of poverty and dependency.¹⁶⁴ Rather than reinforcing idleness, as the existing system does, the welfare system should be restructured to provide an incentive for recipients to leave the welfare rolls and assume and continue productive employment.

in the Structure of the AFDC Program Since 1935, 59 CORNELL L. REV. 825 (1974). A classic analysis of public welfare suggests that, historically, its major purpose has been to reduce unrest among the poor during cyclical periods of high unemployment. See F. PIVEN & R. CLOWARD, *REGULATING THE POOR: THE FUNCTION OF PUBLIC WELFARE* (1972); see also WELFARE IN AMERICA: CONTROLLING THE DANGEROUS CLASSES (B. Mondell ed. 1974). Piven and Cloward trace the origins of public relief systems to the mass disturbances that followed the long transition from feudalism to capitalism beginning in the 16th century. F. PIVEN & R. CLOWARD, *supra*, at 8-22. Congress created the present American welfare system in response to the mass unemployment and the rise of disorder that occurred during the Great Depression, *id.* at 45-119, and expanded it dramatically during the urban crisis of the 1960's, *id.* at 183-340. For recent criticisms of the welfare system, see, e.g., M. EDELMAN, *FAMILIES IN PERIL* 76, 91-93 (1987); G. GILDER, *WEALTH AND POVERTY* (1981); L. MEAD, *BEYOND ENTITLEMENT* (1986); and C. MURRAY, *LOSING GROUND: AMERICAN SOCIAL POLICY, 1950-1980* (1984). For a related criticism of AFDC as fostering family disintegration by penalizing two-parent families and encouraging fathers to desert the home, see, e.g., M. EDELMAN, *supra*, at 72; and R. MORONEY, *SHARED RESPONSIBILITY: FAMILIES AND SOCIAL POLICY* 6 (1986). For related criticisms of Supplemental Security Income (SSI), a cash assistance program for the aged, blind, and disabled administered by the Social Security Administration, suggesting that it reinforces the continued disability of former mental patients, see S. ESTRAFF, *MAKING IT CRAZY: AN ETHNOGRAPHY OF PSYCHIATRIC CLIENTS IN AN AMERICAN COMMUNITY* 150-73 (1981). For criticisms that SSI discourages families from caring for their own disabled members by penalizing the disabled who live with their families or relatives compared to those who live in institutional settings, see R. MORONEY, *supra*, at 133, 144.

163. Stevens, *supra* note 162, at A21, col. 6.

164. By reinforcing dependency, the welfare system contributes to what anthropologist Oscar Lewis described as the "culture of poverty":

Once it comes into existence it tends to perpetuate itself from generation to generation because of its effects on children. By the time slum children are age six or seven, they have usually absorbed the basic values and attitudes of their subculture and are not psychologically geared to take full advantage of changing conditions or increased opportunities which may occur in their lifetime.

O. LEWIS, *LA VIDA: A PUERTO RICAN FAMILY IN THE CULTURE OF POVERTY* xiv (1966); see also Lewis, *The Culture of Poverty*, 215 SCI. AM. 19 (1966). But see W. WILSON, *THE TRULY DISADVANTAGED: THE INNER CITY, THE UNDERCLASS AND PUBLIC POLICY* 137-38 (1987) (suggesting that poverty is more a product of social and economic forces than of cultural ones).

There can be little doubt that welfare reform requires large-scale education, training, and job placement programs, with a special focus on teen-age mothers and others likely to be on welfare for long periods. Rather than requiring that welfare recipients participate in such programs as a condition of receiving public assistance (the "workfare" approach),¹⁶⁵ government could provide an incentive to encourage voluntary participation in such programs in a more meaningful manner. Welfare recipients could be offered a governmental wager under which, if they participate in such programs and/or obtain and continue in a job for a specified period, they will receive a negotiated monetary or non-monetary reward.¹⁶⁶ In contrast, if those who enter into the wager fail to perform satisfactorily, they will sustain an agreed-upon monetary or non-monetary sanction. Individuals at intake, or at the negotiation or participation stage of the wager, could be offered, on a voluntary basis, the opportunity to participate in a variety of training and counseling programs designed to facilitate their social and occupational reintegration. These programs could include remedial schooling, vocational training, and education in the conventions of living and working—like setting goals, using budgets, getting to work on time, and dealing with the boss, fellow workers, and job frustration.

The wager can stimulate the motivation needed to influence at least some welfare recipients to elect to engage in job training and to accept job placement, and to participate in both pursuits in a meaningful way, maximizing their potential for success. Some may decline the wager but agree to counseling or job placement anyway. For those who elect to participate in the wager, the promise of the negotiated reward upon successful completion of the program, or perhaps provided at periodic intervals following successful completion of intermediate target goals, and the corresponding threat of the agreed-upon sanction for non-compliance, can provide the needed incentive to break up the pattern of learned helplessness¹⁶⁷ and dependency that our existing welfare system has fostered. Hopefully, the welfare recipient opting for such programs will gain a new sense of self-efficacy and self-esteem that itself will reinforce future employment even beyond the time when the extrinsic rewards of the wager are available. Moreover, for those successfully pursuing the wager, the economy may

165. The workfare approaches with which some states have experimented may only produce technical compliance by recipients, who may merely go through the motions of attending workfare programs without deriving any real benefits.

166. Creativity in the selection of reinforcement, tailored to the incentive preferences of the individual, would increase the likelihood of success. See *supra* note 64 and accompanying text.

167. See *supra* note 96.

take over and provide the continuing reinforcement that will maintain their new behavior patterns. Indeed, changing demographic trends in many labor markets produced by the sharp decline in the birth rate two decades ago have made entry-level workers in many job categories scarce, increasing the demand for those motivated to succeed.

D. *Other Applications*

Other applications of governmental wagering can easily be envisioned:

1. Wagering with public school students who have repeatedly been truant or have failed courses or performed poorly, in order to increase their school attendance or academic performance, the latter as measured by increased grades, test results, or otherwise. A related target for governmental wagering would be students identified as high risks to drop out of school, in order to deal with a persistent and troubling problem in American education—the failure of one of every four high school students to graduate.

2. Wagering with public employees to induce them efficiently to master a newly introduced technology—*e.g.*, a computerized record-keeping system, a new hospital diagnostic device, word processing rather than manual typewriting, a new tool—or a newly adopted system, schedule, or procedure for job performance.

3. Wagering with mental patients to facilitate their discharge from hospitals, their avoidance of rehospitalization, and their employment, each for specified periods of time.

4. Wagering with juvenile offenders, or with prisoners whose sentences are about to expire or who are about to be released on parole, to avoid recidivism for a specified period of time.

5. Wagering with individuals who are repeatedly intoxicated in public, or deinstitutionalized mental patients who have repeatedly committed a variety of public nuisances, to induce them to refrain, for a specified period, from their antisocial behavior.

6. Wagering with those who are repeatedly ticketed for driving while intoxicated, to avoid a repetition of their life-threatening behavior.

7. Wagering with mental patients to induce them to accept and complete a course of treatment that they may have a constitutional or statutory right to refuse.

8. Wagering with poverty-level pregnant women to induce them to obtain appropriate prenatal care and appropriate pediatric care once their babies have been born.

9. Wagering with teenagers who have previously had an

unwanted pregnancy to induce them to avoid becoming pregnant again for a specified period, or until graduation from high school or marriage.

10. Wagering with police officers for whom there have been prior complaints, to induce them to respect the constitutional rights of citizens by completing a specified number of arrests, searches, or interrogations without a judicial or administrative finding of fourth, fifth, or sixth amendment violations.

11. The same principles can be applied in the private sector, for example, by private employers utilizing the wager to increase employee productivity or reduce the incidence of social or health problems that themselves decrease productivity, such as employee drug abuse, alcoholism, or obesity. Employers, for example, can use the technique to induce employees to participate in exercise or other "wellness" programs designed to improve employee health and reduce absence due to illness. The goal can be set in terms of the number of hours per week or month spent in the program for a specified period, such as six months. In the alternative, specific health goals can be set or negotiated, such as a specified weight loss per month, or reduction in blood pressure, or even a reduction in sick days taken. Many employers already recognize the benefits of instituting or subsidizing such employee health and exercise programs. Use of the wagering technique can provide an additional incentive for their successful utilization, with great potential gain to employer and employee alike.

* * *

Any and all existing mechanisms for accomplishing these goals can remain undisturbed. No school child, welfare recipient, patient, prisoner, or employee would be required or pressured to enter into the wager. Government (or the private employer) would merely make the individual an offer which he would be fully free to accept or reject. The wager would function merely as a motivator for the individual to engage in (or refrain from) some act in order to accomplish self-improvement or the achievement of certain social goals.

One predictable problem is that some individuals, such as welfare recipients who are destitute, will lack the funds necessary to enter into the wager. Perhaps a non-economic sanction can be negotiated, and there is room for creativity here.¹⁶⁸ In any event, the government

168. Individuals could always agree to forego certain privileges that they already possess, for example, to attend the school dance or basketball game, to take a coffee break, to have access to the soda machine, or to relinquish certain possessions temporarily, such as their

should not dispense altogether with the deposit of at least some amount. If the deposit requirement were waived, the individual's stake in the outcome of the wager would be lessened, perhaps considerably, with a resulting decrease in motivation to succeed. For those with little to begin with, even a small stake in the wager may enhance motivation. In the alternative, perhaps friends or family members could provide a loan or other subsidy to allow the individual to make the wager. This presumably would not materially reduce the individual's motivation, and may indeed increase it. Considerations of family obligation, or the wish to avoid disappointing family or friends, could themselves provide the necessary stake in the outcome.¹⁶⁹ Moreover, giving family and friends their *own* stake in the outcome of the wager might have the therapeutic effect of marshalling the family, and the members of the individual's existing support group, to shape the individual's behavior and to change his social environment—an environment that might well serve to reinforce his problem—in ways that will help him achieve the goal.¹⁷⁰

In some circumstances it may be appropriate for the governmental agency to reduce the amount that the individual would need to risk in the wager. In the case of those unable to deposit an amount equal to the amount of the reward that will be paid by the government in the event the goal is achieved, it may be appropriate to accept the deposit of a specified lower amount. In a sense, the government would be giving the individual odds on the accomplishment of the goal. For example, a one hundred dollar wager to remain employed for a period of six months that would return a five hundred dollar payment if the goal is achieved could be analogized to a wager where the odds are five-to-one. The particular discount permitted, if one is to be permitted, would not be calculated, however, based upon the likelihood of achievement of the goal. Rather, considerations of the individual's ability to post the sum in question and its ability to function as an effective motivator would be dispositive. For a destitute welfare recipient, for example, the deposit of one hundred dollars might well evidence a significant degree of seriousness in the accom-

driver's license, bicycle or bus pass (necessitating that they walk to school or work). For discussion of the use of creative reinforcers, see *supra* note 64 and accompanying text.

169. On the other hand, borrowing from friends and relatives may produce negative consequences in some instances. The individual's failure to make repayment in accordance with previous agreements or the refusal by friends or relatives to loan money may create major discord among families and friends. For certain populations, the risk that encouraged borrowing may produce such disruptive influences, may exceed the benefits.

170. For the suggestion that providing a group reward will motivate the group to help a particular member whose performance is in doubt to perform, see A. BANDURA, *supra* note 2, at 281; and Wexler, *supra* note 24, at 104.

plishment of the goal and provide a sufficiently high degree of motivation to bring it about.

Within legislatively set budgetary limits, the governmental agency also could be permitted to offer wagers in a variety of specified amounts, for example, one hundred dollars, five hundred dollars, or one thousand dollars, allowing the individual to select the amount he wishes to wager. A variety of non-monetary reinforcers, either specified in advance or negotiated with the individual, also could be made available. Permitting such individual choice in the setting of stakes would increase motivation both to enter the wager and to succeed in reaching the goal.

IV. THE LEGALITY OF GOVERNMENTAL WAGERING

A. *The Ban on Enforcement of Gambling Contracts and Other Contract Law Problems*

Would this use of the wager by the government fall within state statutory bans on gambling, thereby preventing the government and a willing individual from entering into such an arrangement, or permitting the individual to rescind the contingency contract if he fails to perform, in order to avoid suffering the agreed-upon sanction for non-performance? English common law did not consider wagering contracts illegal.¹⁷¹ American common law, on the other hand, generally regarded wagering contracts as illegal, or at least voidable as against public policy.¹⁷² Moreover, gambling is generally made a crime.¹⁷³

The crime of gambling is typically defined broadly, banning the playing of a number of specified games such as keno or poker or any "other game of chance" for money or other thing of value.¹⁷⁴ Persuasive arguments can be made that the governmental wager or contingency contract would not constitute illegal gambling. It does not involve gambling on the outcome of a game of chance like dice or roulette, or even on a game of skill, such as football or boxing, in which contestants other than the bettor will compete. Rather, the individual controls the contingency that will lead to the payoff or penalty in question. Moreover, the governmental wager would not implicate the public policy considerations thought to justify the prohibition

171. See, e.g., *Hamoden v. Walsh*, 1 Q.B.D. 189 (1876); R. BRENNER & G. BRENNER, *GAMBLING AND SPECULATION: A THEORY, A HISTORY, AND A FUTURE OF SOME HUMAN DECISIONS* 58 (1990); E. FARNSWORTH, *CONTRACTS* § 5.2, at 331 n.4 (1982).

172. See, e.g., *Irwin v. Williar*, 110 U.S. 499 (1884); *Collamar v. Day*, 2 Vt. 144 (1829); *RESTATEMENT (SECOND) OF CONTRACTS* § 178, illustration 1 (1981), § 199(b), illustrations 4, 5.

173. E.g., *FLA. STAT.* § 849.08 (1989).

174. *Id.*

on gambling.¹⁷⁵ Unlike the illegal gambling contract, it does not involve an arrangement in which one party is getting something for nothing, thereby reducing the incentives to engage in socially productive activities and encouraging "shiftlessness, poverty, and immorality."¹⁷⁶

It is not always easy to distinguish illegal wagering contracts from other "aleatory" contracts that have a legitimate commercial or other purpose and are not considered contrary to public policy, but instead are held to be lawful and enforceable.¹⁷⁷ According to Professor Corbin, a wagering agreement is illegal where one or more promises is expressly conditioned upon the happening of a fortuitous event, and this conditional promise is not matched by any agreed equivalent performance given in exchange.¹⁷⁸ A number of lawful aleatory contracts also condition performance on some fortuitous or uncertain event, but what distinguishes the unlawful wagering agreement is that there is no agreed exchange of equivalent performances by the parties in the wager. "Upon full performance by both, as agreed, one of them is sure to get something for nothing."¹⁷⁹ Corbin also distinguishes lawful aleatory contracts from unlawful wagering contracts on the basis that the risk that is assumed by the promisor in the latter is created by the bargain itself.¹⁸⁰ Aleatory contracts of insurance or suretyship are distinguished from illegal wagering contracts on this basis. The governmental wager, even if deemed to itself create the risk involved, would nonetheless fail to satisfy the requirement of no agreed exchange of equivalent performances such that, upon full performance, one of the parties gets something for nothing. Upon full performance of the governmental wager, both parties are the gainers, and therefore neither can be said to have received something for nothing. The individual receives the agreed-upon reward or reinforcer, and the government receives the benefit of the individual's acting in a socially useful way, or discontinuing his socially inappropriate conduct. The governmental wager can therefore be distinguished from an illegal gambling contract.

Under general principles of contract law, a promise is not insuffi-

175. See Gellhorn, *Contracts and Public Policy*, 35 COLUM. L. REV. 679, 687-88, 690-91 (1935) (courts should not void contracts calling for actions that may be illegal as a matter of statute on the grounds that they violate public policy without a determination that the policy underlying the statute is implicated).

176. E. FARNSWORTH, *supra* note 171, § 5.2, at 331 n.4.

177. See A. CORBIN, *CORBIN ON CONTRACTS* §§ 737, 1481 (1963).

178. *Id.* § 1481, at 638.

179. *Id.* § 1481, at 639.

180. *Id.*

cient consideration for a return promise merely because it is conditional upon an uncertain or fortuitous event, and therefore may never have to be performed.¹⁸¹ Ordinarily, the promise to forbear from the exercise of a particular type of conduct is deemed to be adequate consideration to support a contract.¹⁸² In *Hamer v. Sidway*,¹⁸³ the classic case, a man promised to give his nephew five thousand dollars if he refrained from drinking, smoking, swearing, or playing cards for money until he reached his twenty-first birthday. Although the nephew fulfilled his part of the bargain, the uncle died, and his executor refused to make the payment, alleging lack of consideration. The court held for the virtuous nephew, finding that his act in refraining from this lawful, although deleterious, conduct at his uncle's request constituted valid consideration sufficient to support the uncle's promise.

By contrast, where a promisor already is under a legal duty, his further undertaking to discharge that duty usually is not considered valid consideration because he already has an existing duty to perform the act promised.¹⁸⁴ In the type of governmental wager illustrated by the wager with a drug addict to discontinue his drug use, the contention can be made that because the drug addict already is under a legal duty not to use illicit drugs, his promise to forbear from their use cannot constitute valid consideration. If this contention is accepted, the drug addict could rescind the agreement and avoid the agreed-upon sanction if he fails to perform,¹⁸⁵ thereby destroying an important part of the psychological incentive system on which the contingency contract is based, and undermining its therapeutic value. Would the fact that the individual entering the governmental wager is under an existing legal duty to perform as he promises he will—the addict's duty to avoid taking illegal drugs or the civil servant's duty to work productively—lead courts to decline to enforce such wagering bargains for lack of consideration? This result seems extremely unlikely for a number of reasons. First, although courts in contracts cases continue to pay homage to the requirement of consideration, few actually void contracts on this basis.¹⁸⁶ This observed anomaly suggests an impending paradigm shift.¹⁸⁷ While scholars have not yet

181. *Id.* § 737, at 437; RESTATEMENT (SECOND) OF CONTRACTS § 76 comment c (1981).

182. See A. CORBIN, *supra* note 177, § 135, at 575.

183. 124 N.Y. 538, 27 N.E. 256 (1891).

184. RESTATEMENT (SECOND) OF CONTRACTS § 73 (1981); A. CORBIN, *supra* note 177, § 135, at 578; E. FARNSWORTH, *supra* note 171, § 4.21, at 272.

185. See RESTATEMENT (SECOND) OF CONTRACTS § 178 (1981).

186. See G. GILMORE, *THE DEATH OF CONTRACT* 63 (1974).

187. See E. FARNSWORTH, *supra* note 171, § 2.18, at 87-88; G. GILMORE, *supra* note 186, at 87-88; Farber & Matheson, *Beyond Promissory Estoppel: Contract Law and the "Invisible*

concluded that the consideration requirement is a vestige of formalism,¹⁸⁸ in large part it is precisely that. As long as a bargain is seriously entered into with sufficient formal or ceremonial manifestations to impress the parties that their arrangement will be legally binding, it should not be unenforceable for lack of consideration.¹⁸⁹ To the extent courts insist on consideration, allowing the formal recitation of a promise to pay nominal consideration ("ten dollars and other good and valuable consideration" in form contracts, or a peppercorn in the example my contracts teacher used to beat us up with) to meet the requirement suggests a form of genuflection to a hollow idol. It is reasonable for drug addicts or civil servants to enter into a wagering bargain in order to help themselves attain a goal that is important to them and to the government, and one that thus plainly is in the public interest. Moreover, the wager with the government will be reflected in a written agreement ceremoniously (and perhaps even publicly) entered into. As a result, courts should not employ the consideration doctrine to prevent such a bargain from being enforced on the basis of the individual's preexisting legal duty to do that which he promises.

Even if the consideration requirement is taken seriously in this context, the addict or worker is doing more than promising to do his duty; he is promising to use his best efforts to try to meet his public duty, something that he has not done before. This commitment, and his participation in an optional arrangement that will increase the likelihood that his duty finally will be discharged, is a promise that the law should honor. Moreover, the consideration problem presented in a wager with, for example, the drug addict should be dismissed because the contingency contract with the drug user imposes not only the requirement that he forbear from using illegal drugs for a period of time, but also that he submit to periodic drug testing, a requirement not otherwise imposed by the law. This latter undertaking is an independent promise of performance that itself should constitute sufficient consideration to support the agreement.¹⁹⁰

Handshake," 52 U. CHI. L. REV. 903, 905, 929, 945 (1985); Knapp, *The Promise of the Future—and Vice Versa: Reflections on the Metamorphosis of Contract Law* (Book Review), 82 MICH. L. REV. 932, 938-42 (1984) (reviewing E. FARNSWORTH, *CONTRACTS* (1982)). For the classic analysis of the concept of the paradigm shift, in the context of the evolution of scientific theory, see T. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (2d ed. 1970).

188. See A. CORBIN, *supra* note 177, § 111, at 495-96; G. GILMORE, *supra* note 186, at 21; Fuller, *Consideration and Form*, 41 COLUM. L. REV. 799 (1941).

189. See Farber & Matheson, *supra* note 187, at 929-30, 945; Fuller, *supra* note 188 at 799; Knapp, *supra* note 187, at 938.

190. See RESTATEMENT (SECOND) OF CONTRACTS § 73 (1981) ("Performance of a legal duty owed to a promisor which is neither doubtful nor the subject of honest dispute is not consideration; but a similar performance is consideration if it differs from what was required

Even a promise that is not supported by consideration can be enforced if it results in reasonable reliance on the part of the other party, who changes his position in response to the promise.¹⁹¹ The requirements for such promissory estoppel would be satisfied in the context of the governmental wager. Because governmental resources in any wagering program are inevitably limited, the government, by entering the wager with the individual, is in effect allocating a scarce resource—the opportunity to participate in the program—to the individual, in reasonable reliance on his promise to perform. As a result, for several reasons the governmental wager should be considered legally enforceable.

Not only does the wager with the government avoid these contract law pitfalls and fail to implicate the public policies that traditionally have served to justify the ban on gambling contracts—the avoidance of idleness and immorality¹⁹²—but it also fails to violate another major public policy concern underlying statutory prohibitions on gambling—the desire to avoid the spread of pathological gambling. Gambling contracts are not enforced because their enforcement would violate a number of public policies against gambling. Public attitudes concerning gambling, however, have shifted dramatically in recent years, as evidenced by the reaction to Pete Rose's resignation from baseball in the wake of revelations in 1989 concerning his gambling activities.¹⁹³ Wagering in America (excluding friendly bets between individuals) is estimated to have increased 57% since 1983, and Americans were thought to have spent \$278 billion on betting in 1989.¹⁹⁴ The largest component of this increase involves legal gambling.¹⁹⁵ Although in 1964 only one state, New Hampshire, had a lottery, by 1988 thirty-two states and the District of Columbia operated lotteries and collected an estimated seventeen billion dollars in 1988, an increase of 230% from 1983.¹⁹⁶ There is broad agreement that this state-sponsored gambling is largely responsible for the huge increase in all types of wagering.¹⁹⁷ Legislatively sanctioned lotteries and other kinds of gambling have placed a public imprimatur of legiti-

by the duty in a way which reflects more than a pretense of bargain."); E. FARNSWORTH, *supra* note 171, § 4.21, at 273.

191. RESTATEMENT (SECOND) OF CONTRACTS § 90 (1981).

192. *See* E. FARNSWORTH, *supra* note 176, § 5.2, at 331 n.4; *supra* notes 171-176 and accompanying text.

193. *See* Church, *Why Pick on Pete?*, TIME, July 10, 1989, at 16.

194. *Id.* at 16, 18.

195. *See supra* note 171 and accompanying text.

196. *Id.* at 18.

197. *Id.* at 20.

macy on gambling generally, accounting in large part for its increased popularity.

Although public attitudes concerning gambling are obviously in flux, there is continued concern about the social problem of compulsive or pathological gambling. Preventing the spread of pathological gambling serves as a major justification for the continued prohibition on illegal gambling. The question may be raised whether approving governmental wagering of the kind proposed here would further legitimize gambling generally, and therefore further encourage pathological gambling. The spread of the lottery and other kinds of legal gambling, by making gambling accessible to more people, undoubtedly has increased the prevalence of pathological gambling. The governmental wager proposed here, however, should not have this adverse effect.

A number of theories seek to explain compulsive gambling behavior, but none would support the concern that the governmental wager involved here would encourage pathological gambling. Gambling, of course, can be explained behaviorally.¹⁹⁸ Indeed, the slot machine, previously mentioned as an illustration of variable ratio reinforcement, is explicitly based on principles of operant conditioning.¹⁹⁹ Will success in a wager with the government concerning the attainment of job performance or educational goals, for example, followed by receipt of the agreed-upon reward, reinforce wagering behavior in more traditional gambling contexts? This danger seems unlikely. Compulsive gambling involves betting on games of chance, such as dice, roulette, or horse racing, that are decided quickly and provide immediate reinforcement after the bet is won, as well as the thrill of anticipating and experiencing the win. The governmental wager, by contrast, involves performance within the individual's control and lasts over an extended period. Accordingly, it seems unlikely that engaging in the governmental wager will turn people into compulsive gamblers.

Some research links problem gambling behavior with what has been termed the "illusion of control" phenomenon.²⁰⁰ Under this theory, certain cues suggesting that an individual has had a measure of control over the outcome of a game will increase that individual's perception that he will be able to control the game's chance-determined

198. See J. ORFORD, *supra* note 113, at 175-78; Donegan, Rodin, O'Brien & Solomon, *supra* note 113.

199. See J. ORFORD, *supra* note 113, at 176; *supra* note 70 and accompanying text.

200. See Burger & Smith, *Desire for Control and Gambling Behavior Among Problem Gamblers*, 11 PERSONALITY & SOC. PSYCHOLOGY BULL. 145 (1985); Langer, *The Illusion of Control*, 32 J. PERSONALITY & SOC. PSYCHOLOGY 311 (1975).

outcome, and this illusion of control in turn will increase his gambling behavior.²⁰¹ To the extent that participation in a governmental wager of the kind described here will produce feelings of control in individuals who are successful in the wager, these feelings may have the beneficial effect of reinforcing future behavior which is in line with the socially productive conduct the wager with the government seeks to reward. Whether such feelings of control also would reinforce illegal gambling behavior, however, seems unlikely. Engaging in a long-term course of behavior pursuant to a wager with the government would not seem comparable to betting on the outcome of sporting events or participating in games of chance. It is difficult to believe, therefore, that positive feelings engendered by participation in the former activity would somehow transfer to the latter in ways that would reinforce pathological gambling.

A newly emerging theory of gambling behavior suggests that compulsive gamblers may have an abnormality of the adrenergic system and may engage in gambling behavior to increase the levels of certain brain chemicals.²⁰² To the extent that gamblers in some fashion become addicted to the rush of adrenalin that gambling produces, it would seem unlikely that the long-term activities involved in the governmental wager would stimulate such a chemical response.

It thus seems doubtful that implementation of the governmental wager would lead participants to become pathological gamblers. Wagering with the government will hopefully produce socially useful behavior, and will not breed compulsive gambling, corruption, loan-sharking, criminality, or other antisocial or undesirable conduct associated with gambling. The public policy concerns underlying statutory prohibitions on gambling would therefore not be implicated by such governmental wagers.

The governmental wager is more appropriately regarded as a contractual arrangement involving the bilateral exchange of promises to perform reasonably commensurate acts. Indeed, it is very much like a construction contract, in which the contractor receives an agreed-upon fee if a project is completed by a particular date but incurs a specified penalty as liquidated damages for each day the project's completion is delayed.²⁰³ In a sense, the contractor is gambling on his ability to complete the project on time, and thus receive the

201. Burger & Smith, *supra* note 200.

202. See Roy, De Jong & Linnoila, *Extraversion in Pathological Gamblers: Correlates with Indexes of Noradrenergic Function*, 46 ARCHIVES GEN. PSYCHIATRY 679 (1989).

203. 5 S. WILLISTON, CONTRACTS § 78, at 733-34 (3d ed. 1970); see, e.g., *Robinson v. United States*, 261 U.S. 486 (1923); *Morgen & Oswood Const. Co. v. Big Sky of Montana, Inc.*, 171 Mont. 268, 557 P.2d 1017 (1976).

entire fee and avoid the penalty, and the owner is hoping that the fee provision and penalty clause will induce timely performance. As long as the stipulated penalty is not unreasonable under the circumstances, or out of proportion to the anticipated losses resulting from breach, which often are difficult to estimate, such an arrangement is not deemed an unenforceable penalty²⁰⁴ or illegal gambling. Instead, the courts consider it a legally enforceable contract, a commercially reasonable arrangement that both parties enter voluntarily because each perceives it to be in his best interests to do so. The institution of private contract is premised on the desirability of enforcing such mutually agreed-upon, voluntary undertakings.²⁰⁵ Businessmen intuitively understand the principles of behavioral psychology that operate to induce each party to fulfill his obligations under the contract. Indeed, when the government acts as a private party in entering into contracts with business and industry, as it frequently does, government today undoubtedly being the largest purchaser of goods and services in our society, it employs these principles, utilizing penalty clauses to induce performance.²⁰⁶ Why shouldn't the government be free to use the same techniques when it acts in the public health and social service areas? The social costs that government is attempting to avoid through the wager are extremely difficult to estimate, making agreed-upon liquidated damages reasonable whether monetary or non-monetary in nature. The government will undergo expenses in connection with the negotiation, preparation, and monitoring of the wagering contract, and will lose the social benefits sought to be accomplished. A fixed penalty, provided that it is not unreasonable in light of these difficult-to-estimate losses, will only partially compensate government for its expenses and the individual's failure of performance, and it certainly will not constitute an unfair windfall to the

204. RESTATEMENT (SECOND) OF CONTRACTS § 356, 356 comment b (1981); *see, e.g.*, *Leasing Serv. Corp. v. Justice*, 673 F.2d 70 (2d Cir. 1982); *Truck Rent-A-Center, Inc. v. Puritan Farms 2nd, Inc.*, 41 N.Y.2d 420, 361 N.E.2d 1015, 393 N.Y.S.2d 365 (1977); E. FARNSWORTH, *supra* note 171, § 12.18, at 898. The parties' characterization of the stipulated sum as "liquidated damages" or as a "penalty" is not controlling. The court will decide, based on the reality of the transaction, whether the provision represents permissible liquidated damages or an unlawful penalty. E. FARNSWORTH, *supra* note 171, § 12.18, at 898-99.

205. 2 RESTATEMENT (SECOND) OF CONTRACTS 2-3 (1981) (introductory note to ch. 8); E. FARNSWORTH, *supra* note 171, § 5.1, at 325; Williston, *Freedom of Contract*, 6 CORNELL L. REV. 365, 366-67 (1921); *see also, e.g.*, *Printing & Numerical Registering Co. v. Sampson*, 19 L.R.-Eq. 462, 465 (1875); *Maryland-National Capital Park & Planning Comm'n v. Washington Nat'l Arena*, 282 Md. 588, 605-07, 386 A.2d 1216, 1228-29 (1978).

206. *See, e.g.*, *Priebe & Sons, Inc. v. United States*, 332 U.S. 407 (1947); *Robinson v. United States*, 261 U.S. 486 (1923).

government.²⁰⁷ The public policy against enforcement of penalties will, therefore, not apply to the type of penalty involved in the governmental wager.

The governmental wager thus does not offend any general principles of contract law, and the public policies against enforcement of penalties or gambling contracts would not be implicated. In any event, even if one were to analogize wagering with government to a game of chance, games of chance are lawful if authorized by the legislature. Statutorily authorized lotteries, or pari-mutual wagering on horse or dog racing, for example, are lawful rather than unlawful gambling. Indeed, the government has used lotteries, which clearly are games of chance, in a number of contexts to allocate scarce resources or governmental benefits, such as public housing,²⁰⁸ or even to impose burdens, such as the draft or jury duty.²⁰⁹ Not only have these uses survived judicial challenge, but expanded use of the lottery by the government has been advocated in several areas as the fairest method of making certain allocation decisions,²¹⁰ such as liquor and broadcast licensing²¹¹ and decisionmaking about the use of kidney dialysis treatment, where patient need far exceeds the available supply.²¹² In a sense, these uses of the lottery can be seen as gambling,

207. See *Truck Rent-A-Center, Inc. v. Puritan Farms 2nd, Inc.*, 41 N.Y.2d 420, 425, 361 N.E.2d 1015, 1018, 393 N.Y.S.2d 365, 369 (1977).

208. See Greely, *The Equality of Allocation by Lot*, 12 HARV. C.R.-C.L. L. REV. 113 (1977). Indeed, courts have suggested that "in cases where many candidates are equally qualified . . . further selections be made in some reasonable manner such as 'by lot.'" *Holmes v. New York Hous. Auth.*, 398 F.2d 262, 265 (2d Cir. 1968) (allocation of low-rent public housing) (quoting *Hornsby v. Allen*, 330 F.2d 55, 56 (5th Cir. 1964) (involving the allocation of liquor licenses)); see also *Star Television, Inc. v. Federal Communications Comm'n*, 416 F.2d 1086, 1095 (D.C. Cir.) (Leventhal, J., dissenting) (discussing random allocation of broadcasting licenses), *cert. denied*, 396 U.S. 888 (1969); cf. Winick, *supra* note 105, at 415-17.

209. Winick, *supra* note 105, at 417 n.467. In the face of an equal protection challenge, the Court of Appeals for the Ninth Circuit upheld the draft lottery, under which persons available for induction into the armed services are chosen in order of birthdates selected by lottery. See *United States v. Johnson*, 473 F.2d 677 (9th Cir. 1972). The government chooses grand and petit jury pools through random selection, see 28 U.S.C. § 1863 (1988), which is thought to avoid the arbitrary exclusion from the jury of any particular class of persons. See, e.g., *United States v. Davis*, 518 F.2d 81 (10th Cir.), *cert. denied*, 423 U.S. 997 (1977). Selection by lot also long has been appropriate in the desperate situation when shipwrecked lifeboat occupants have run out of food. See *United States v. Holmes*, 26 F. Cas. 360, 367 (C.C.E.D. Pa. 1842) (No. 15,383).

210. See Greely, *supra* note 208; Winick, *supra* note 105, at 416. One empirical study revealed that candidates for an innovative educational program perceived random assignment as the fairest method of selection. Wortman & Rabinowitz, *Random Assignment: The Fairest of Them All*, in PROCEEDINGS AND BACKGROUND PAPERS: CONFERENCE ON ETHICAL AND LEGAL PROBLEMS IN APPLIED SOCIAL RESEARCH §§ 15-1 to 15-10 (1979).

211. See Greely, *supra* note 208.

212. See P. RAMSEY, *THE PATIENT AS PERSON: EXPLORATIONS IN MEDICAL ETHICS* 247 (1970); Freund, *Introduction to EXPERIMENTATION WITH HUMAN SUBJECTS* at xvii (1969).

but they are not unlawful gambling. Surely, like the use of lotteries in these areas, the legislature could authorize governmental wagering to accomplish certain limited social objectives consistent with maintaining prohibitions on traditional gambling. The determination of which social goals are appropriate ones for the utilization of this technique would be made either by the legislature, or by a governmental agency pursuant to power delegated to the agency by the legislature with a specification of standards for its exercise.

B. *The Prohibition on Bribery*

Is wagering by the government to induce behavioral change a form of bribery to persuade people to do what they should do anyway? Although some will no doubt criticize my proposal on this ground, the payoff for successful completion of the goal cannot be considered a bribe in the sense of the criminal prohibition, which is limited to inducements given to someone in a position of trust to influence him to act dishonestly or corruptly.²¹³ Wagering to induce drug addicts to refrain from drug use or civil servants to perform more productively is no more a bribe than are tax incentives given to businesses to induce them to engage in research activities,²¹⁴ to homeowners to induce them to install energy conservation devices in their homes,²¹⁵ or to builders to induce them to construct or rehabilitate low-income housing.²¹⁶ Moreover, such governmental wagering would seem no more a bribe than the government's offer of a reward for the capture of a wanted fugitive, such as the highly publicized 1989 offer of one million dollars for the capture of General Manuel Antonio Noriega.²¹⁷

The wisdom of utilizing wagering with the government to accomplish any particular purpose is ultimately a question that will be resolved by the political process. Perhaps several of the applications of the technique discussed here as illustrations will prove too unpopular to be authorized. I assume that the political process will anticipate or respond to strongly held public attitudes on which goals are inappropriate for the utilization of governmental wagering, and that legislatures or administrative agencies can be relied upon to avoid using

But see E. CAHN, *THE MORAL DECISION: RIGHT AND WRONG IN THE LIGHT OF AMERICAN LAW* 71 (1955).

213. *See, e.g.*, FLA. STAT. § 838.016 (1989).

214. *See* I.R.C. § 41 (1989).

215. *See id.* § 23.

216. *See id.* § 42.

217. *See* N.Y. Times, Dec. 21, 1989, at 1, col. 6.

the technique for such goals or to respond quickly to correct choices that prove unpopular.

It may be useful in this context to posit the existence of a baseline for determining the propriety of the kinds of behavior that will qualify for reward eligibility through use of the wagering technique. Several of the problems discussed here as candidates for governmental wagering, such as improving job performance or individual health, involve conduct that is not itself unlawful, antisocial, or even deviant, but which we would nonetheless like to change. Here we are willing to provide incentives to improve conduct that may not itself be subject to condemnation. On the other hand, some of the social problems discussed here, such as drug addiction, driving while intoxicated, or police misconduct, involve conduct that is prohibited, antisocial, or deviant. For some of this behavior we would be willing to use wagering in effect to bring conduct up to the baseline; for others, however, we would not, feeling that it is inappropriate to reward people for following rules that others follow as a matter of course. Again, public attitudes ultimately will determine which kinds of conduct falling below the baseline are proper candidates for the governmental wager and which are not, and to the extent that a consensus emerges, the relevant governmental agency may set standards, perhaps through public rulemaking procedures,²¹⁸ for the use of wagering.

C. *The Constitutionality of the Governmental Wager*

Is governmental wagering of the type discussed here unconstitutional? Does it involve a coercive application of governmental power to infringe individual liberty? Undoubtedly, for at least some poor people, the promise of a large monetary reward might seem to be, in the words of the *Godfather*, an offer they cannot refuse,²¹⁹ and, hence, the functional equivalent of governmental coercion. For reasons discussed earlier, irresistible inducements should be avoided in order to minimize the potential for engendering feelings of psychological pressure, which can have a counterproductive effect, perhaps creating a negative "psychological reactance."²²⁰ Coercion, alternatively, can trigger a form of the "overjustification effect" in which the individual may accomplish the specified goal, but because he attributes his

218. See, e.g., Administrative Procedure Act § 4, 5 U.S.C. § 553(c) (1988) (notice and comment rulemaking); FLA. STAT. § 120.54 (1989) (same); REV. MODEL STATE ADMIN. PROCEDURE ACT §§ 3-103 to 3-106 (1981) (West Supp. 1990) (same). See generally J. O'REILLY, ADMINISTRATIVE RULEMAKING (1983).

219. M. PUZO, THE GODFATHER 89 (Fawcett Crest ed. 1969) ("'He's a businessman,' the Don said blandly. 'I'll make him an offer he can't refuse.'").

220. See *supra* note 140 and accompanying text.

behavior to external pressure, will not experience any lasting attitudinal or behavioral change.²²¹

In any event, the inducements of the wager, no matter how tantalizing, would not be found illegal. The courts have never treated mere financial (or even non-financial) inducements as governmental coercion rising to the level of unconstitutionality. Society is pervaded by governmental incentives designed to induce a variety of behaviors and attitudes. For example, the government offers businessmen tax credits designed to spur certain activities,²²² awards students "A's" if they perform well in school, offers army recruits bonuses and other incentives to persuade them to enlist, and induces criminal defendants to enter guilty pleas by prosecutorial offers of charge-reduction or sentence recommendation. Further, the government induces people to play the state lottery by offering million-dollar jackpots, the proceeds of which are used to fund public education. Finally, the state awards prison inmates "good time" credit toward parole eligibility for good conduct, and participation in rehabilitative programs as "a tangible reward for positive efforts made during incarceration."²²³ Although, in each of these cases, the government provides rewards for the explicit purpose of inducing or reinforcing certain behavior, few would contend that these positive reinforcements constitute impermissible coercion²²⁴ or violate the Constitution.²²⁵

As previously discussed, the governmental wager may be seen as an application of learning theory combining positive reinforcement and aversive conditioning. The empirical evidence suggests a strik-

221. See *supra* note 99 and accompanying text.

222. See *supra* notes 214-16 and accompanying text.

223. N.Y. COMP. CODES R. & REGS. tit. 7, § 260.1(a) (1983).

224. See, e.g., *Bordenkircher v. Hayes*, 434 U.S. 357 (1978) (plea bargaining offers); *Brady v. United States*, 397 U.S. 742 (1970) (plea of guilty in response to statutory discrepancy in penalty available to those convicted versus those pleading guilty); see also A. WERTHEIMER, *supra* note 104, at 172, 267-68, 287, 301, 308 (legal and philosophical analysis of coercion arguing that in the case of proposals or offers, coercion should be limited to proposals that are illegal or immoral); cf. RESTATEMENT (SECOND) OF CONTRACTS §§ 174-76 (1981) (standard of duress limited to physical compulsion or improper threats). See generally *supra* notes 101-11 and accompanying text (analyzing concepts of voluntariness and coercion in the context of the governmental wager).

225. As the United States Supreme Court stated:

There is a basic difference between direct state interference with a protected activity and state encouragement of an alternative activity consonant with legislative policy. Constitutional concerns are greatest when the State attempts to impose its will by force of law; the State's power to encourage actions deemed to be in the public interest is necessarily far broader.

Maher v. Roe, 432 U.S. 464, 475-76 (1977) (footnotes omitted); accord *Webster v. Reproductive Health Servs.*, 109 S. Ct. 3040, 3052 (1989); see also *Rust v. Sullivan*, 111 S. Ct. 1759 (1991).

ingly high success rate with clinical applications of these behavioral approaches in the treatment of a variety of conditions.²²⁶ However, it appears that these behavioral techniques work only with cooperative patients, and successful treatment cannot be forced on patients against their will.²²⁷ Although conditioning techniques frequently are portrayed as having the dramatic power to induce change automatically, without the cooperation of the subject, such as in Anthony Burgess' novel, *A Clockwork Orange*,²²⁸ these techniques do not in fact have such powerful effects.

Cognitive psychology has shown that, rather than occurring automatically, conditioning is cognitively mediated.²²⁹ Albert Bandura, long a student of behavioral theory, has dispelled the "mechanistic metaphor" often associated with the process of conditioning:

Explanations of reinforcement originally assumed that consequences increased behavior without conscious involvement. The still prevalent notion that reinforcers can operate insidiously arouses fears that improved techniques of reinforcement will enable authorities to manipulate people without their knowledge or consent. Although the empirical issue is not yet completely resolved, there is little evidence that rewards function as automatic strengtheners of human conduct After individuals discern the instrumental relationship between action and outcome, contingent rewards may produce accommodating or oppositional behavior depending on how they value the incentives, the influencers and the behavior itself, and how others respond. Thus reinforcement, as it has become better understood, has changed from a mechanical strengthener of conduct to an informative and motivating influence.²³⁰

Reinforcers, under the emerging cognitive paradigm, are regarded as "motivators," depending for their success on the "incentive preferences of those undergoing change."²³¹ Behavioral conditioning, with few exceptions,²³² cannot succeed absent the conscious involvement and cooperation of the individual, who remains free to

226. See NIMH BEHAVIOR MODIFICATION REPORT, *supra* note 2, at 10-11.

227. See E. ERWIN, BEHAVIOR THERAPY: SCIENTIFIC, PHILOSOPHICAL, AND MORAL FOUNDATIONS 180 (1978); Beck, *supra* note 2, at 502-03; Marks, *The Current Status of Behavioral Psychotherapy: Theory and Practice*, 133 AM. J. PSYCHIATRY 253, 255 (1976); Winick, *supra* note 105, at 360; and Winick, *Right to Refuse*, *supra* note 50, at 80.

228. A. BURGESS, *A CLOCKWORK ORANGE* (1963).

229. See *supra* notes 52-60 and accompanying text.

230. Bandura, *supra* note 51, at 860.

231. *Id.* at 862; see also Winick, *supra* note 105, at 360-61; Winick, *Right to Refuse*, *supra* note 50, at 80.

232. See, e.g., Lepper, Zanna & Abelson, *Cognitive Irreversibility in a Dissonance-Reduction*

decline the positive reinforcer or receive the aversive consequence without changing his behavior. It is therefore extremely doubtful that courts would regard inducements to behavioral change provided by the governmental wager as sufficiently coercive to trigger constitutional condemnation.

Moreover, because acceptance of the wager is within the voluntary control of the individual, the Constitution would not be infringed by governmental applications of this technique to accomplish social goals. Individuals may possess a number of constitutional rights that they are asked to forego as a condition for entering into a wager with the government, such as the right to refuse to submit to periodic drug testing.²³³ With a limited number of exceptions, however, constitutional rights are waiveable.²³⁴ Criminal defendants who enter guilty pleas, for example, waive a number of fundamental rights under the fifth and sixth amendments, including the right to effective assistance of counsel, to trial by jury, to confrontation of adverse witnesses, and to avoid self-incrimination.²³⁵ In upholding the constitutionality of plea bargaining, the United States Supreme Court specified the elements of an effective waiver: "Waivers of constitutional rights not only must be voluntary but must be knowing, intelligent acts done with sufficient awareness of the relevant circumstances and likely consequences."²³⁶ This formulation is consonant with the Court's traditional waiver standard that requires the government to prove the existence of "an intentional relinquishment or abandonment of a known right or privilege."²³⁷ Because a condition of the governmental wager proposed here is that it be voluntary, an individual entering into such an arrangement would be explicitly waiving any constitutional rights he might otherwise have, to avoid doing something required by the wager contract—for example, by submitting to periodic drug testing. Particularly where the wager calls for the foregoing of a constitutional privilege, the contingency contract should explic-

Situation, 16 J. PERSONALITY & SOC. PSYCHOLOGY 191 (1970) (conditioning can occur without conscious awareness).

233. See *supra* note 129 and accompanying text.

234. See Winick, *supra* note 105, at 383.

235. See *Boykin v. Alabama*, 395 U.S. 238, 243 (1969).

236. *Brady v. United States*, 397 U.S. 742, 748 (1970).

237. *Johnson v. Zerbst*, 304 U.S. 458, 464 (1938) (waiver of sixth amendment right to counsel) cited in *Brady*, 397 U.S. at 748 n.6. See also, e.g., *Fuentes v. Shevin*, 407 U.S. 67 (1972) (standard for waiver of notice in conditional sales contract); *The Bremen v. Zapata Off-Shore Co.*, 407 U.S. 1 (1972) (upholding validity of forum selection clause); *D. Overmyer Co. v. Frick Co.*, 405 U.S. 174 (1972) (upholding validity of cognovit note); *Miranda v. Arizona*, 384 U.S. 436, 475-76 (1966) (standard for waiver of right not to make a statement to police during custodial interrogation).

itly advise the individual that, by entering into the agreement, he is voluntarily relinquishing such a privilege. As long as the individual voluntarily and knowingly agrees, such a waiver should be constitutionally unobjectionable.

V. CONCLUSION

I have suggested that the government may harness the power of the wager to motivate individuals to undertake behavioral changes deemed desirable by government and to help bring about these changes. Government has long been in the business of social engineering, and at this late date there should be no controversy about the legitimacy of the government attempting to achieve certain social goals—such as curtailing drug addiction, increasing public employee productivity, encouraging employment, improving public health, decreasing the school dropout rate, and lessening recidivism by criminal offenders. The means used to achieve these goals, however, have not always been effective. The technique I suggest, adapting principles of behavioral, cognitive, and social psychology to accomplish social goals, can be seen as an application of what David Wexler and I call “therapeutic jurisprudence.”²³⁸ As I have argued, if governmental wagering is properly carried out, it can be a more effective, less coercive approach to accomplish social goals that violates neither constitutional nor contract law prohibitions. Constitutional and contract law principles are sufficiently elastic to permit such social experimen-

238. See D. WEXLER, THERAPEUTIC JURISPRUDENCE: THE LAW AS A THERAPEUTIC AGENT (1990); D. WEXLER & B. WINICK, ESSAYS IN THERAPEUTIC JURISPRUDENCE (1991); Winick, Therapeutic Jurisprudence Applied (June 25, 1988) (unpublished paper presented at XIV International Congress of the International Academy of Law and Mental Health, Montreal, Canada) (available on file at *University of Miami Law Review*). Professor Wexler and I have discerned in our individual work in mental health law a common concern for analyzing the therapeutic impact of legal rules. Is a particular legal rule, either presently in effect or proposed, therapeutic or antitherapeutic to patients, and to society as a whole? In our view, legal decisionmaking should consider not only economic factors, public safety, and the protection of individual rights; it also should take into account the therapeutic implications of a rule and its alternatives. See, e.g., Wexler, *Grave Disability and Family Therapy: The Therapeutic Potential of Civil Libertarian Commitment Codes*, 9 INT'L J.L. & PSYCHIATRY 39 (1986); Wexler, *Patients, Therapists, and Third Parties: The Victimological Virtues of Tarasoff*, 2 INT'L J.L. & PSYCHIATRY 1 (1979); Wexler & Schopp, *supra* note 50; Winick, *Competency to Consent*, *supra* note 50; Winick, *Competency to Consent to Involuntary Hospitalization: A Therapeutic Jurisprudence Analysis of Zinermon v. Burch*, 14 INT'L J. L. & PSYCHIATRY 169 (1991); Winick, *Incompetency to Stand Trial: An Assessment of Costs and Benefits, and a Proposal for Reform*, 39 RUTGERS L. REV. 243 (1987); Winick, *supra* note 138; B. Winick, *The Right to Refuse Treatment: Constitutional Limitations on Mental Health and Correctional Therapy* (unpublished manuscript). Professor Wexler and I believe that clinical and empirical insights from the mental health disciplines should be used in shaping mental health law and law in general to increase its potential as a therapeutic agent. We have come to call this insight “therapeutic jurisprudence.”

tation in the public interest. A therapeutic jurisprudence would thus sanction creative use of the wager, thereby recognizing the potential of law as an instrument of social and individual change and as a therapeutic agent.

We are in a period of heightened concern about social problems, which seem to be dramatically increasing in both number and complexity. Crime, drug addiction, alcoholism, AIDS, homelessness, environmental pollution, and increasing social and individual pathology often seem to be problems beyond our grasp, although increased resources freed up by the decreased defense spending that should follow the end of the prolonged Cold War and the cessation of hostilities in the Persian Gulf could create new opportunities. We also are in a period of increased threat to civil liberties, as more and more Americans seem willing to trade away certain constitutional protections to enhance law enforcement efforts in the war on crime and drugs.²³⁹ And this threat is a serious one, given an increasingly conservative Supreme Court. The Court is the institution in American life that historically has functioned as the guardian of constitutional liberties in times of crisis, or at least it is supposed to play this role. The Court today, however, is more deferential to autonomy of the states and of the coordinate branches of government than to individual rights, as evidenced by its increased willingness to sanction the use of extreme measures to solve social problems.²⁴⁰ The wagering program proposed here is an alternative approach to solving social problems that is less intrusive on constitutional values than more coercive and extreme measures principally because its hallmark is voluntariness. Because it attacks the causes of social problems by seeking to motivate personal change, rather than treating their effects, governmental wagering is a program that deserves to be tried.

As indicated earlier, the ideas advanced in this Article are exploratory, and are offered in the hope of stimulating dialogue. We need to view social problems differently if we are to succeed in crafting new solutions. Whether these theoretical proposals would work, particularly for seriously disadvantaged populations, remains to be tested, and I hope that they will encourage not only discussion, but also pilot projects by governmental agencies or the private sector in a variety of areas to permit their empirical examination. Indeed, given the budgetary deficits many state and local governmental entities face,

239. See Wicker, *supra* note 112, at 23.

240. See *Washington v. Harper*, 110 S. Ct. 1028 (1990) (authorizing involuntary psychotropic medication of competent prisoner for security purposes); *Stanford v. Kentucky*, 109 S. Ct. 2969 (1989) (permitting capital punishment of juveniles); *Penry v. Lynaugh*, 109 S. Ct. 2934 (1989) (permitting capital punishment of mentally retarded defendants).

this may be an excellent opportunity for public spirited businesses or private groups to forge a creative public/private partnership in which business and industry, foundations and private philanthropy, religious and community organizations, and union and other trust funds contribute the resources and creative non-monetary reinforcers needed to permit the wagering approach to be tested, and to be expanded if successful.²⁴¹ A behavioral incentive to such private generosity already exists, of course—the charitable deduction from taxable income.²⁴²

In many ways, the bet is a metaphor for the way life is. We learn to consider and set goals and we observe the instrumental connection between the efforts we are willing to put forth to achieve them and the probability and desirability of their attainment. As we mature, we learn what pleases us and what displeases us, and how to obtain the former and to avoid the latter. We learn to balance short-term utility against long-term objectives. Many never learn these basic lessons and, as a result, develop maladaptive behavior patterns that impede their ability to live reasonably happy, productive, and self-fulfilling lives. Some learn patterns of helplessness and never develop many of the functional capacities necessary for successful living. Feeling themselves to be subject to external forces beyond their control, they become apathetic and resigned. For some, these deficits are due to lack of exposure to opportunities to learn; for others, they are due to a failure to master the basic skills of learning itself. In some cases, the lack of opportunity to learn is due to the unresponsiveness of social systems and the existence of systemic obstacles to exposure to learning opportunities.²⁴³ The bet described herein has the potential for reaching out to those who have failed to acquire these basic skills, and suffer social, health, occupational, or educational problems as a result. It also has the potential for breaking down the social barriers that impede learning.

The bet makes explicit the goal and the consequences of its attainment or non-attainment. For those who choose to seek its attainment, the bet facilitates their appreciation of the instrumental value of their efforts. The bet harnesses the power of individual

241. See Hinds, *supra* note 64, at 10, col. 1 (describing contributions by local businesses to Philadelphia high school incentive program to decrease the school dropout rate). These contributions could include certificates redeemable for records, pizzas, and tickets to movies, rock concerts, and sporting events.

242. See I.R.C. § 170 (1989).

243. See A. BANDURA, *supra* note 12, at 413; Gurin & Brim, *Change in Self in Adulthood: The Example of Sense of Control*, in 6 LIFE-SPAN DEV. & BEHAV. 281 (1984); Gurin, Gurin & Morrison, *Personal and Ideological Aspects of Internal and External Control*, 41 SOC. PSYCHOLOGY 275 (1978).

choice and stimulates intrinsic motivation. Not only can the bet help people to master specific skills or achieve particular goals, but it also can teach them much more. It can teach them how to develop general strategies for setting and achieving personal goals, and in the process, free them from many of their problems, enabling them to achieve their potential. It can teach them much about life and how to enjoy it, to the ultimate enrichment of the individual and the community. In short, this can be a bet in which we all can win and no one must lose.