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THE CONTROL OF BEHAVIOR THROUGH LAW: THEORY AND PRACTICE

D. Chris Anderson and Thomas L. Whitman***

I. Introduction

More than ever before there have been increasing demands made upon the social sciences and in particular psychology to make relevant its theory and research. The immediate and critical problems of society demand prompt attention if not prompt solution. With the current emphasis on law and order in our country both by those fearing the demise of the current organization of society and those attempting to revamp that structure, it is particularly appropriate that psychology should address itself to this issue.¹ Within this century the scientific thrust of psychology, like the legal system, has been concerned with the process by which behavior is controlled and altered. While psychology should not dictate the formal value structure which is composed of laws of society, it can analyze within an empirical framework the development, promulgation and administration of those laws. This paper is directed toward that end.

Our general aim is to develop a context in which the legal system and its relation to psychology can be examined. The first section of this paper will explicate the scientific structure of psychology;² the major misconceptions, assumptions of and objections to this structure by other disciplines and laymen will be summarized. In the second and third sections, the major assumptions of the legal system will be discussed and a definition of law expounded. In the fourth section the types of contributions psychology can make to the legal system will be elaborated.

II. Psychology Is a Science

A. Some Misconceptions Regarding Psychology

Before a discussion of the issues focal to the title of this paper, a number of myths, preconceptions, and generally incorrect opinions about psychology need to be examined. Typically, the layman views psychology with awe and mystery because, in some vague way, it has something to do with the mind. Presumably, psychologists and psychiatrists can, with their tests and their superior knowledge, "read or get into the mind." These and similar misconceptions have, in the view of the layman, provided psychology with an aura of fascination as well as of charlatanism.

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1 A number of recent publications are now devoted exclusively to an exposition of psychology for the laymen. Notable among these is *Psychology Today* (GRM Publishers), which has devoted several issues almost totally to law and order (e.g., February, 1969).

2 A good exposition of psychology as a science can be found in K. SPENCE, *BEHAVIOR, THEORY AND CONDITIONING* 1-24 (1956) and Stevens, *Psychology and the Science of Science*, 44 *PSYCHOLOGICAL BULLETIN* 221-63 (1939).

Even within professional circles, psychologists and psychiatrists are often considered to be scientific experts who possess special skills to probe the private consciousness and personality of others much as the hematologist has special tools for examining the blood. This view has root in the ancient Greek notion that the mind is resident in the body and, much like the blood, has as its defining properties knowing and reasoning—two elements of the private stream of consciousness.

Actually, psychology can be viewed with frightening and awesome perspective, but for quite different reasons than outlined above. Psychology, as a valid scientific discipline, has developed tools capable of producing powerful results. However, because psychology still is, relatively speaking, in its scientific infancy, much of its power remains a promise to be fulfilled rather than a reality. Psychology, while initially concerned with personal consciousness, is no longer a discipline which deals with the mind. Psychologists came to realize that "mind" unfortunately was too vague, imprecise and ambiguous a term to provide the basic datum for a new scientific discipline. Thus, from the standpoint of contemporary psychology, the mind is a term that might more properly be reserved for investigation within one of the several non-scientific subdisciplines within the broad umbrella of philosophy. The science of psychology must exert the same care and concern as any other scientific discipline in the specification of its subject matter.³ The result is that it legitimately cannot study events that were not discernible in one way or another by the human senses. The mind clearly was an entity that could not be directly observed.

The history of psychology is replete with vigorous debates regarding the criteria which should be used to determine the actions, contents and the workings of the mind.⁴ Around the turn of the century some psychologists, disillusioned over the continued disagreement pertaining to the mind, suggested that psychology might more aptly turn to empirically observable events for its subject matter.⁵ Since it was generally agreed that one of the more likely outcomes of the operations of the mind was gross behavioral change, many psychologists decided to examine the behavior of organisms independent of the mind in order to determine if more satisfactory laws might emerge within the behavioral domain.⁶

3 For a clear and highly interesting account of the history and evolution of psychology as a science see E. BORING, *A HISTORY OF EXPERIMENTAL PSYCHOLOGY* (1950).

4 See E. BORING, *SENSATION AND PERCEPTION IN THE HISTORY OF PSYCHOLOGY* 3 (1933).

5 W. JAMES, *VARIETIES OF RELIGIOUS EXPERIENCE* (1914) seems to have been one of the first to note that at least some psychologists were turning away from the study of the mind in suggesting that psychologists tended to be either tender-minded or tough-minded. The tender-minded were supposed to be rationalistic, idealistic, optimistic, religious, free-will advocates. In contrast, the tough-minded were supposed to be imperialistic, empiricistic, sensationalistic, materialistic, pessimistic, irreligious, and fatalistic.

6 Watson, *Psychology as the Behaviorist Views It*, 20 *PSYCHOLOGICAL REVIEW* 158-77 (1913) rejected the material of the conscious as the subject matter of psychology. Although often accused, he did not deny the existence of consciousness, but simply proposed that it be used in the same way as in other sciences. Watson stated: "Psychology, as the behaviorist views it, is a purely objective, experimental branch of natural science which needs introspection as little as do the sciences of chemistry and physics . . . it can dispense with consciousness in the psychological sense. The separate observation of 'states of consciousness' is, on this assumption, no more a part of the task of the psychologist than of the physicist. We might call this the return to a non-reflective and naive use of consciousness. In this sense consciousness may be said to be the instrument or tool with which all scientists work." *Id.* at 176.

Psychologists, in recent decades, have come to the consensual agreement that their basic task is to discover ways to describe, predict and control behavior. Given this change of subject matter it is of interest to examine some of the basic suppositions required concerning how behavior was to be studied.

B. *Assumptions and Tenets of Behaviorism*

Establishing observable behavior as the focus of study for a new discipline is not a totally sufficient foundation for any scientific endeavor. Along with this specification of its phenomena, certain assumptions are required before a science can proceed to understanding the development of behavior. For example, from the outset a deterministic bias or assumption was apparent in the writings of those who argued that behavior constituted the basic datum of psychology.⁷ Both early and contemporary behavioral scientists have assumed that there are variables or factors which cause or bring about the occurrence of the behavior of organisms.⁸ Thus, the task of psychology has evolved from exploring the "stream of consciousness"⁹ to determining the possible lawful relationships that existed between behavior (the effect), and those variables or factors which preceded and presumably produced it (the cause). This new approach of scientific psychology carried with it a mechanistic philosophy which, from the point of view of the antagonists of behaviorism, was repugnant and degrading to the dignity of man.

A supplementary supposition of behaviorism is that the behavior of organisms is a naturally occurring phenomenon.¹⁰ Behavior is like any other material event or substance in the world in that it occurs in the natural milieu or world about us. It is unrealistic to view behavior as specially ordained or, for that matter, as different from any other event that occurs in the world (actually,

7 "Determinism," in the scientific sense, constitutes the assumption that events, conditions and phenomena in the real world can be understood or explained in terms of other events or conditions within the same system. That is, phenomena are to be explained within the system or world where they occur. This is in contrast with the notion of external causation which asserts that an account of real-world events sometimes is possible only through postulating causal influences outside the world or the system within which such events occur.

8 The traditional explanation of human behavior is that we act because we have reasons for acting. That is, because we have free will, our reasons constitute a sufficient account of human action. Unfortunately, the traditional rationalist has provided no explicit hypotheses about how volition, an attribute of the mind, is supposed to work to produce behavior. Moreover, no answers are provided when one questions how an intentional act itself arises from the individual's perceptions, knowledge, and feelings. The proponents of traditional rationalism insist that there are no rules describing volitional action. They say that the mind of man cannot be bound by lawfulness; it operates creatively and dynamically rather than according to fixed predictable principles. Plato said that the psyche is that which moves itself; it has laws of its own being and needs no others. Similar statements about the inherent unpredictability, the untrammled freedom of the human mind, seem to be one of the major inheritances from the past. The traditional view thus does not provide an explanation of behavior in any real sense (empirical or otherwise) since it is not a coherent, consistent, testable set of propositions about behavior. Indeed, it is in large measure a denial that such a set of propositions can be found.

9 W. JAMES, *THE PRINCIPLES OF PSYCHOLOGY* (1890).

10 Since the fundamental assumption of all science is that its data must be available for scrutiny by the senses, it seems strange that some sciences would be labeled as natural and others not. A natural science is one whose subject matter is part of the naturally occurring world about us. Thus defined, psychology must qualify as a natural science since it is the study of that which is naturally occurring, namely, the behavior of organisms.

anything defined as an event must, by definition, be part of the world). Behavior is the natural consequence of any living organism that has the capacity to react to stimuli. It thus follows that, psychology is no different than physics or chemistry in that it must be viewed as a natural science.¹¹ By assuming that behavior was determined by factors which could be discovered and empirically examined within the setting about him, the behaviorist essentially was accused of denying the more traditional view that the human being could ever be autonomous or free from environmental control.

The necessity of a deterministic assumption in psychology can be appreciated when one considers the plight of the behavioral researcher. It would be difficult to gain any enthusiasm about research if, for example, the scientist began his task in the knowledge that it was impossible to establish any lawful relationships between man's physical environment, his biological makeup and his behavior. Without a deterministic framework, the behavioral scientist would have only an entanglement of highly tentative environment-biology-behavior relationships which would be subject to the erratic and unpredictable influence of unobservable entities such as the will or volition of the subject under investigation. This inherent unpredictability of behavior is antithetical to the basic philosophy of scientific disciplines which strive for understanding of their phenomena through observing and controlling observable variables.

Although early in the history of psychology it was acknowledged that a deterministic bias regarding behavior might be repellent to those steeped in the Christian tradition of free agency and volition, it was thought necessary as a working assumption in order to ascertain whether or not behavior indeed was lawful. When one considers the assumptions underlying psychological inquiry which delineate it as the study of an objectively identifiable set of phenomena that are predictable, consistent and naturally occurring, then psychology's allegiance to science is obvious.

11 It has been argued by some that, while behavior may be naturally occurring, it is not amenable to scientific study because exact measurements are not possible regarding the responses of organisms. Moreover, it is stated that although physics deals with inanimate phenomena and is capable of predicting them, psychology can never predict the behavior of human beings because it is so complex and inscrutable. Regardless of whether these objections are right or wrong, it is not the subject matter of a discipline that determines it as a science or not. Instead, scientific status is earned by the *methods of investigation* brought to bear upon a group of problems. Viewed this way, psychology differs from physics only because of the convenience of dividing the labor between the various fields of scientific endeavor.

An additional assumption of scientific psychology is that behavior is consistent. Actually, this assumption is no more than a restatement that behavior is predictable. Although we may not be aware of it, we rely on the assumption that the behavior of others is stable. Our common experience repeatedly buttresses this assumption. People generally appear consistent in their behavior, especially when there are not radical differences from one situation to the other. Given some knowledge regarding how a person previously performed, in response to a given situation, our best prediction of his subsequent performance in a similar setting will be the same behavior which we previously observed. Much of contemporary personality theory is based on this assumption. Each of us seems to adopt typical patterns of behavior which serve to help us adjust or adapt to our environment. Notwithstanding rare instances in which environmental stimuli are drastically different from one situation to the other, we probably are not observed as changing much in our behavior by those around us. Laboratory findings in psychology support this assumption of behavioral consistency. If, for example, a dog has learned a strong salivation response to a given stimulus or stimulus pattern, it will continue to elicit that reaction, albeit not as strongly so, in the presence of similar but not identical stimuli. This conforms to what Pavlov called the "law of stimulus generalization."

C. Variables of Known Importance for the Control of Behavior

Assuming that behavior can be determined, there can be no question but that it is a complex process. Indeed, it has been argued that one of the overriding factors that has tempered the advance of scientific psychology has been the prevailing notion that the determination of lawful behavior relationships was unfeasible because human behavior varies over such a wide range of possibilities. The basic challenge to the behavioral scientist has been to account for this behavior complexity in terms of the variables which produce behavioral change.

The kinds of variables that fruitfully have been studied can be categorized roughly into three divisions, namely, areas pertaining to the perceptual, motivational, and learning aspects of behavior. Perceptual variables primarily refer to stimulus conditions that prevail at the time or just prior to the time when behavior occurs. Variables, such as the rate of stimulus change, stimulus intensity, brightness, loudness, duration, complexity, etc., all have been shown, under certain circumstances, to have predictable effects on behavior. Motivational variables are those which influence the intensity dimension of behavior. The strength, energy or vigor of behavior usually has been taken to reflect the degree with which motivational factors are operative. Such basic physiological conditions as depletion of certain bodily resources (e.g., water, food, certain sex hormones, etc.) or the presence of intense emotion can provide a substantial intensification of behavior.¹²

Typically, the effect of motivational variables on behavior is a transient one in that there usually is no residual or behavioral aftereffect once the motivational agent has been eliminated or terminated. This effect is to be contrasted with the learning process. "Learning" is a term which has been used to describe the acquisition, strengthening and maintenance of a typical pattern of behavior and also the conditions which promote regular occurrence of such behavior. The process of learning underlies the plasticity and flexibility of human behavior. It is this process which presumably contributes to long-term behavioral change, and which is necessary if an individual is to adapt to the changing demands of his environment. Because of its extreme importance, learning has occupied the focus of attention of a good majority of experimental psychologists over the past three decades. The result of this research has been the discovery of factors which contribute to the formation of habits (i.e., the presumed product of learning). Relationships have been discovered which, at least as demonstrated in the laboratory, have allowed the psychologist to selectively strengthen, maintain, and extinguish many forms of behavior. Moreover, psychologists have found it fruitful to view such phenomena as attitudes, preferences, perceptions, value

¹² There are reasons for most behavior. The infant tries to get food or escape from pain. The dog runs to his master to be petted or away from him to avoid punishment. You are now reading this paper to satisfy your curiosity about psychology and the law. Even the helter-skelter behavior of the infant in public has direction. Mammals appear to need activity in order to maintain their muscles in a healthy state. In short, there is motivation in behavior and much of it is goal-oriented. The psychology of motivation deals with variables that activate and direct behavior. Why do we get hungry? When hungry, why is our behavior directed toward steak and potatoes instead of snails and garlic sauce or roasted grasshoppers? How do fears develop and function? These are but a few of the questions of concern to psychologists interested in motivation.

systems, and other uniquely human functions as habits or habit systems, each of which is acquired through the process of learning.

The most important outcome of the research in learning, however, has been the discovery of variables that contribute to the shaping of behavior. At least two factors have acquired overriding importance in this regard. Both of these can be subsumed under the term "reinforcement." In its most abstract form reinforcement refers to any event which can strengthen or weaken the behavior upon which it is contingent. Put even more simply reinforcement is a term used to designate the effect of rewards and punishments on behavior. A reward is any event which will strengthen the behavior upon which it is contingent and punishment is any variable which will weaken behavior under similar circumstances.

While it is apparent that man has long known that rewards and punishments can sometimes effectively change behavior, the major new findings that have emerged from the laboratories of behavioral scientists are the important modifications and extensions of this knowledge. Behavioral scientists have developed highly effective methods for using rewards and punishments. The most important ingredient in the effective use of reinforcement is to employ it in a systematic and consistent fashion. When dispensed on a haphazard basis, reinforcement can have rather bizarre effects on an organism's behavior. When reinforcement is given without systematic regard for behavior, the organism may learn to interact with its environment in a superstitious and unrealistic manner. As a further consequence of learning research it is now possible to sustain incredibly long periods of highly consistent behavior when reward or punishment is applied intermittently. Also, psychologists now have a much better understanding of such additional factors as the effects of *delay* of reward or punishment, the role of the *magnitude* of reward and punishment, as well as the relationship of the *kind* of reward or punishment which will be most effective in determining behavior when the past history of the organism is taken into consideration. While assuredly there are other variables which have powerful impact on behavior, the clever and systematic use of, for example, rewards and punishments can be a highly potent force for controlling and predicting simple and complex human responses.

D. Implications of Behaviorism for Man in General

One consequence thus far of our analysis is rather straightforward. As already mentioned, like any scientist who deals with naturally occurring events, the psychologist also assumes that his phenomena are lawful. "Lawfulness" means that there are specifiable relationships between events preceding behavior and the behavior *per se*. It therefore is incumbent on the psychologist to discover those factors and variables which bring about or cause the occurrence of responses. That behavior is a function of multiple and concurrently operating factors has, however, posed major problems for isolating the contribution of each and specifying its action. In order to discover complete cause-effect relationships, extensive experimentation needs to be conducted, a major part of

which requires the development of new and vigorous methodologies designed to control the extraneous factors which inevitably also impinge upon and influence the behaving organism.¹³

A consequence, then, of the supposition that behavior is lawful and that these laws are discoverable is that the behavior of man is predictable and controllable. By substituting the term "behavior" for the term "mind" it has been possible to discover a large array of principles pertaining to the control and the prediction of human activities.

It is noteworthy to point out that man historically has resisted attempts to be controlled, probably because such attempts often have been connected with force. Man's history seems to have conditioned him to associate the deterministic thesis with punitive or painful coercion. Consequently, situations which suggest that man's reactions might be manipulated have been deemed aversive and to be avoided. Somewhat ironically, man (or society) has simultaneously established institutions (bearing an aversive hallmark) designed to accomplish the very thing he seems to fear the most. For example, by establishing educational institutions he has attempted to control the behavior of his children through selective (often aversive) indoctrinational procedures. Man further has embellished upon this goal of controlling others through the establishment of additional behavior-regulation institutions such as the Church and a variety of governmental agencies including its legislative, judicial and law-enforcement branches.¹⁴ Thus, although seemingly fearing the idea of control and manipulation of his own behavior by others, man nevertheless apparently has been sufficiently intuitive to recognize that it may be necessary to employ techniques and strategies to guide and direct the behavior of others and has felt it of sufficient importance to have constructed an entire society with institutional control as its foundation.

Unfortunately, the contradiction which results from the fear of control and the concomitant use of regulative techniques to manipulate the behavior of others seems to have produced undesirable consequences.¹⁵ The relatively chaotic conditions that presently prevail in our society may be partial testimony to the fact that man has not yet found a way to efficiently manipulate others while, at

13 In certain ways Pavlovian-type conditioning experiments have been to psychology what the vacuum has been to physics. Both made it possible for the scientist to investigate important variables in isolation; both have contributed enormously to the fund of basic knowledge; and both are highly artificial situations. But because laboratory conditioning is such an artificial situation, inferences from it for everyday life can be very misleading. One unfortunate aspect of laboratory research, therefore, has been the exclusion of variables which normally contribute to our day-by-day activities in the non-laboratory, real world about us. This is why psychologists more recently have employed situations more representative of real-world conditions. We now find behavioral scientists attempting extrapolation of laboratory-derived principles and procedures to settings involved in the treatment of the retarded, the mentally ill, the convicted criminal, and in the education of the normal child. See THARPE & WETZEL, *BEHAVIOR MODIFICATION IN THE NATURAL ENVIRONMENT* (1971).

14 See B. SKINNER, *SCIENCE AND HUMAN BEHAVIOR* (1953) (especially section 5: Controlling Agencies).

15 Some psychologists have argued that the major way in which governing agencies control behavior is through the use of threat, personal injury and/or fear of retaliation. Moreover, it has been stated that similar uses of fear characterize a majority of the transactions of the parents with their children in our society. Probably the reason for its frequent usage is that punishment or the threat of punishment is easy to dispense, requires a minimum of patience, and brings about immediate (albeit temporary) results. This latter observation repeatedly has been confirmed in the laboratory with lower animals. B. CAMPBELL & R. CHURCH, *PUNISHMENT AND AVERSIVE BEHAVIOR* (1969).

the same time, continue to enigmatically preach the inherent evils of ideologies which embrace as their major goal the systematic control of human behavior. This is one place where psychology can make one of its more important contributions. Through the research efforts of the behavioral scientist psychology can provide information which may lead to more efficient and propitious ways of directing and guiding behavior while minimizing the sometimes undesirable results of such manipulations. For example, physical punishment often has been rejected by society as a means of controlling its members because of its traumatizing effects on the punished individuals. Results from psychological research suggest, however, that punishment produces long-term undesirable emotional problems only when it is administered in a delayed, noncontingent, and erratic manner but not when it is immediately and specifically applied. Moreover, such research has also indicated that punishment is most effective in changing behavior when it is used in conjunction with reward procedures.¹⁶

E. *Common Arguments Against an Objective Behavioral Approach*

As mentioned, a completely deterministic model of behavior is both perplexing and repugnant to many. Presumably, the reason for this has to do with the apparent implications of a cause-and-effect analysis for the issues of personal freedom and responsibility. Historically, man has often taken the view that, while his body may function in a lawful manner, his mind or his soul is his own.¹⁷ That is, his mind is free from the constraints of both the body in which it is

16 For representative current views on punishment see Azrin and Holz, *Punishment*, in *OPERANT BEHAVIOR: AREAS OF RESEARCH AND APPLICATION* 380-447 (W. Honig, ed. 1966); Church, *The Varied Effects of Punishment on Behavior*, 70 *PSYCHOLOGICAL REVIEW* 369-402 (1963); and Solomon *Punishment*, 19 *AMERICAN PSYCHOLOGIST* 239-53 (1964).

17 This dualistic view that man is composed of a body which operates in a machine-like fashion and a soul which functions in accord with laws of its own was both authored and popularized by Rene Descartes. See J. HALDANE & A. ROSS, *THE PHILOSOPHICAL WORKS OF DESCARTES* (1955). On the one hand Descartes antedated Darwin (*ORIGIN OF SPECIES* (1859)) by conceding, philosophically, a biological continuum along which both the human and infrahuman could be found but, contradictorily, disqualified man from the continuum by virtue of his presumed possession of a qualitatively different soul.

We can thank the Greek philosophers for present conceptions pertaining to the all-powerful mind and its control of what we do. For Plato and most Greek philosophers, virtually all other determinants of behavior, including such motivational ones as hunger and sex, had only fleeting effect on man's behavior because they always could be overridden by his faculty of reason, the latter being a major attribute of the mind.

This position virtually permeates the thought of modern man. Consider the following quotation ". . . man has sensuous desire, and rational desire and will. He is not absolutely determined in his desires and actions by sense impressions as is the brute, but possesses a faculty of self-determination, whereby he is able to act or not to act . . . the will is determined by what intelligence conceives to be the good, by a rational purpose. This, however, is not compulsion; compulsion exists where a being is inevitably determined by an external cause. Man is free because he is rational, because he is not driven into action by an external cause without his consent, and because he can choose the means of realizing the good or the purpose which his reason conceives." This quotation was not taken from Plato or Aristotle but, instead, from a discussion of the philosophy of Thomas Aquinas who wrote 1500 years later. Moreover, it is the position taken today by most Catholic writers on the question of the control of behavior. E.g., F. THILLY, *HISTORY OF PHILOSOPHY* (1957).

The term mind thus variously has been taken to mean the household of reason, of intellect, of free will or agency, and is the foundation of what is known as traditional rationalism. The mind from this point of view is that which at the same time provides both the freedom and the decision for all courses of action.

housed and the environment in which it operates. This autonomy or personal freedom carries with it an important consequence, namely, that it allows for the assignment of personal responsibility. By allegedly having possession of free volitional powers and the ability to discriminate and choose between right and wrong, man is thus able potentially to make correct decisions with regard to moral action, and as a consequence becomes entirely responsible for his decisions. It is important to note that the overriding feature of this view of man is that, unless the victim of mitigating circumstances (to be discussed), he is always a free agent and, because of this personal license, he conceivably could go against the basic tenets of conventional morals and could participate in illicit actions.

This analysis of the free-agency position highlights an implication which is the antithesis of most behavioristic schemes of human endeavor. The concept of free-agency, as it is presently stated, emancipates man from his environment and provides him with an autonomy couched in the language of unpredictability and indeterminism. In essence, it would not be possible to have complete prediction or control over a free-agent since he can, when he so desires (assuming desire is undetermined), ignore his past history and pervading environmental influences. Since free-agency is a requisite for personal responsibility to many, this view apparently is critical in order for an offender to be prosecuted for his offensive actions. A judge thus can render judgment on the ground that, had the offender not "wanted" to commit socially unacceptable action, he could have so "chosen" to avoid the incorrect behavior.

The repugnance to the layman of a deterministic behavioristic analysis of human endeavor thus can now be highlighted. By arguing that man's behavior is the function of factors, events and variables which are in the world about us, behavior no longer can be viewed as a product of some autonomous internal agency.¹⁸ Within a behavioristic analysis, the reactions of men are "controlled" or determined by motivational, perceptual, learned and biological variables. A full account and understanding of behavior can be achieved only when complete knowledge becomes available regarding the past and present influence of these variables upon the behaving organism.

If behavior really is so caused, it is questionable whether one can actually assign personal responsibility to a person's actions in the traditional sense since this causal-deterministic model of behavior seemingly discounts the ingredient of choice in human endeavor. Within this model, personal responsibility, like any other uniquely human attribute, must itself be viewed as taught or learned in accordance with the same cause-effect principles that govern all other behavior. In a sense, then, personal responsibility refers to a category of behaviors which

18 The assertion that man's behavior is under the control of some autonomous internal agency (soul) is the same as stating that a homunculus ('little man) resides within man, his sole purpose being to guide, direct, and otherwise regulate all human actions. Autonomy has been bestowed this homunculus by the traditional rationalist's assertion that this internal agency has its own laws and, by definition, is not available to outside analysis. Unfortunately, the notion of an inner man provides no better explanation of our behavior than a simple description of the behavior to be explained. In other words, the homunculus theory is a completely circular one. Moreover, it introduces the problem of an infinite regress because one must posit yet an additional "inner-man" to explain the actions of the original homunculus, etc.

society deems as desirable for an individual to possess. These behaviors are then learned in the same way as are all other forms of human behavior which are necessary for adaptation and survival.¹⁹ Personal responsibility can be taught by: (a) determining the circumstances which require its occurrence, (b) specifying the behavioral components which constitute responsible action, and (c) selectively and systematically rewarding those components in the presence of the situational stimuli which demand effective human action. Indeed, a behavioral psychologist probably would argue that were the principle of determinism universally accepted, there is little question that society could inculcate much more efficiently those habit systems which constitute personal responsibility. By allowing the acquisition of these responsible behaviors to occur in a more haphazard and unsystematic manner than is necessary, society as now organized cannot be said to effectively foster personal responsibility in its citizenry.

This analysis brings us to an additional interesting question, namely, if determinism is to be the password by which behavior is to be understood, how did the concept of free agency emerge in the first place? The concept of free agency quite probably took root from man's observations of the apparent unpredictability of behavior. Because of ignorance on the part of the more curious of our forefathers regarding the factors that complexly determine behavior, human actions and reactions probably often seemed to reflect autonomy and independence from such factors. From the vantage point of our naive and unenlightened predecessors, then, the best account of our behavior was in terms of an indeterministic or unpredictability model.²⁰ Free agency, as a concept, provided an explanation of this apparent indeterminacy.²¹ It is not difficult to see how this position could have been propagated. By rewarding children for developing the view (verbalization) that certain components of behavior were the desirable outcome of their free agency and that other components represented undesirable outcomes, a foundation would be provided for the acquisition of an indeterministic position of personal responsibility.²² It can be seen from this analysis that free agency also can be viewed as a foundation which, through selective reinforcement procedures, is acquired through the process of learning. We believe that this analysis has important implications for the legal system that presently is operative in our society.

19 Because of Darwin (*THE ORIGIN OF SPECIES BY MEANS OF NATURAL SELECTION* (1859)) the modern-day psychologist views behavior in terms of the function it serves for the behaving organism. Adaptation and survival have become two criteria against which behavior is evaluated.

20 Indeterminacy in this context refers to unlawfulness. That is, a full knowledge of all of the factors, conditions, and variables surrounding an event does not provide a sufficient basis for making an absolute prediction. Given that such unpredictability could be found in the environment, some would take this to mean that there is something that transcends, in both power and influence, the variables of the real world. The traditional rationalist asserts that this transcendent power is the soul.

21 We already have discussed the notion that free agency is the essence of behavioral indeterminacy. Free agency (will) is that attribute of the soul which can, through its transcendent powers, "override" the influences of the environment and/or social sanctions of society.

22 For a reinforcement theory of the development of verbal behavior see B. SKINNER, *VERBAL BEHAVIOR* (1957).

III. The Legal System: Underlying Assumptions

A. *Personal Responsibility and the Judicial System*

The concepts of free agency and personal responsibility constitute the basis of the judicial system. In order to be consistent with the contemporary legal system, a judge assumes, unless evidence is provided to indicate otherwise, that the individual was in full possession of his faculties at the time of his misdeed and therefore was able to act of his own free will without restraint when confronted with a decision between right and wrong. If that choice was inconsistent with the law, as revealed by the facts of the case, then the individual's behavior can be labeled as morally irresponsible and accordingly punished.

B. *Tests That Are Used to Alleviate Personal Responsibility*

As mentioned, to justly assign guilt and deliver punishment in the present judicial system, it may be necessary to determine whether free agency was impeded in its operation. That is, it may be imperative to determine whether the individual being judged was in full possession of his faculties at the time of his alleged undesirable action—full possession of one's faculties being deemed necessary for a full-blown expression of free agency. The degree to which faculties are impaired, therefore, is apparently positively correlated with the degree to which one's autonomy in making decisions is obscured or mitigated.

It has not always been true in Western society that the judicial system has acknowledged the possibility of mitigating circumstances as an important consideration in the alleviation of personal responsibility. Prior to the seventeenth century, the guilt of an accused criminal was often ascertained by tests which were believed to express the Will of God, and punishment was prescribed according to the prevalent principle such as the Law of Talion.²³ In 1724, Judge Tracy formulated the "wild beast" test²⁴ according to which an offender was not held responsible for his actions if he could not distinguish good from evil to a greater extent than could a wild beast. Presumably, the prevailing opinion was that it was not the nature of a wild beast to discern right from wrong or to be able to substitute good for evil. Put another way, a wild beast was assumed to be devoid of volition. If a human thus acted as a wild beast, he could not be considered a free agent. This acknowledgement of mitigating circumstances therefore was tantamount to acknowledging that the free agency of man sometimes could be impaired or "overridden" by certain extenuating factors.²⁵

²³ As cited in Leifer, *The Psychiatrist and Tests of Criminal Responsibility*, 19 AMERICAN PSYCHOLOGIST 825-30 (1964).

²⁴ *Id.*

²⁵ The notion that free agency can be "overridden" seems at times contradictory to the present authors. One finds as a major thematic component in early Greek philosophical writings the notion that the determinants of behavior other than those of the will have little direct bearing on a man's actions because they could always be "overridden" by his faculty of reason. The will is free because it is always directed toward the future; it is not strained by the present situation (except insofar as a man's reason is limited by his education). Plato did recognize as "forced" movements those produced by the animal passions, but he considered them awkward, graceless, and lacking in purpose. He viewed them as essentially random or

The most important consequence of this concession to interfering factors external to the behaving organism was the implication for the role of causality as far as violations of the law were concerned. As mentioned, by the 1700's a reduction in free agency was viewed as the result of an increase in the degree to which behavior was controlled by "forces" or factors which overcame the prerogatives of free will. In other words, the degree to which causal factors could be found to account for behavior, especially insofar as these causal or precipitating factors produced bestial or animalistic-like reactions, was the degree to which a judge could conceptually tolerate an alleviation of personal responsibility.

A more refined version of the "wild beast" test was formulated in 1843. This test, the *McNaughten* rule,²⁶ used a cognitive criterion to determine responsibility. *McNaughten's* acquittal on the grounds of insanity provoked a debate in parliament, the answer to which was embodied in the rules of responsibility which bears *McNaughten's* name:

The jurors are to be told in all cases that every man is to be presumed to be sane and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction: and that, to establish a defense on the grounds of insanity, it must be clearly proved that at the time of committing the act, the party accused was labouring under such defect of reason from disease of the mind, as to not know the nature and quality of the act he was doing; or if he did know it that he did not know that what he was doing was wrong.²⁷

The *McNaughten* rule appears to be a slightly more definitive assertion that responsibility was the reflection of the full and unencumbered action of one's free agency or will.²⁸ Reason was aligned with responsibility and a defect in reasoning was associated with nonresponsibility.²⁹ Grounds for a reduction in the amount of assigned responsibility³⁰ were those which served as sources of inter-

lawless in character and surely not like man's usual, natural activities. See ZELLER, *OUTLINES OF THE HISTORY OF GREEK PHILOSOPHY* (13th ed. J. Palmer transl. 1957). See also LONAGE, *HISTORY OF MATERIALISM* (3rd ed. E. Thomas transl. 1925).

26 The real beginning of the legal treatment of mental instability can be traced to early English law. Insanity was officially admitted to law as an "excuse" for criminal action during the reign of Edward I (1272-1307). However, the most important case in point in the annals of Anglo-American law probably is that of *McNaughten* in 1843. The facts were that *McNaughten* shot Joe Drummond, private secretary to Robert Peal, believing him to be Peal. The defense was insanity. Medical evidence was introduced showing that *McNaughten* was "laboring under an insane delusion" of being hounded by enemies, among them Peal. The jury found him "not guilty, on the grounds of insanity." H. WEIHOFEN, *INSANITY AS A DEFENSE IN CRIMINAL LAW* 25 (1933).

27 *Id.* The unrealistic emphasis on reason in mental disease and the problems of definition encountered in the phrase "mental disease," have often been vigorously debated.

28 The principal issues that emerged from the *McNaughten* decision were that: (a) it codified the notion that certain acts are the results of "mental illness," and that such an "illness" sometimes can be conceived as essentially similar to bodily disease, (b) the post-acquittal fate of the defendant was left unclarified and, (c) the socioeconomic, political, and ethical implications of deviant behavior were obscured in favor of its so-called medical causes.

29 It should be noted that little has changed in the intervening years. This is evinced by the *Durham* rule (*Durham v. United States*, 214 F.2d 862 (D.C. Cir. 1954)) which was handed down in a decision of the United States Court of Appeals for the District of Columbia. Its most significant assertion was that "an accused is not criminally responsible if his unlawful act was the product of mental disease or mental defect."

30 A reduction in the free agency of an individual by virtue of mental illness seems to imply a correlated increase in the possibility that his behavior is under the control of "irresist-

ference with one's knowledge of (or with coming to a knowledge of) right and wrong, that is, those which *intrude* upon the cognitive processes necessary for free agency. Presumably, such obstructions in the expression of free agency thus had the net effect of increasing the mechanistic-like action of behavior. That is, one who performed without knowledge of good and evil was therefore one who behaved more like an animal or an automaton rather than a so-called "rational" human. He was to be viewed as in the "clutches" of the environment and, because of reduced cognitive function, he was unable to fully express his capacity to extricate himself from the grasp of evil.

This interpretation of free agency and the forces which can combine to reduce it remain with us as part of the present philosophy underlying the legal system.³¹ One major problem posed by equating free agency with unobstructed cognitive function is the issue surrounding the term "knowing." The determination of whether or not one "knows" right from wrong is a difficult one, at best. "Knowing" is a uniquely private experience and, hence, defies precise definition. This problem has necessitated procedures which, while more objective in appearance, are designed to ascertain the cognitive capabilities of the defendant by inference. Usually, these procedures are behavioral in emphasis in that "knowing" is assumed if certain behaviors occur and is thought to be absent when certain behaviors do not occur. For example, one behavior that has been used is the verbal statement of the defendant who, when asked, can report whether or not he was "in possession" of his cognitive capabilities at the time he committed his misdeed. Of course, the defendant may not tell the truth. When such is suspected, an attempt is often made to determine if his verbal behavior is consistent with other more identifiable aspects of his performance that were thought to occur during the criminal act.³² The major point here is that behavioral manifestations are necessary to determine the presumed cognitive state of the defendant. It might be argued that since behavior is the sole criterion for ascertaining whether a defendant "knows" right from wrong during his crime, it is unnecessary to assume anything beyond the behavior itself.

C. *Personal Responsibility Versus the Control of Human Behavior*

But what are the implications of a free agency position in the legal system from a behavioristic point of view? The advocate of free agency argues that freedom of choice was necessary at the time of a law violation in order to assign guilt and pass sentence. But if this is the case, certain logical difficulties arise

ible impulses." Thus, "mental illness" seems to qualify as one of those human conditions or situations in which men are believed to be irresistibly driven to act in certain ways. Such "irresistibly" committed actions might be placed in the same category as accidents. Neither is purposefully planned and executed. The basic idea is that some acts are committed as the result of an irresistible impulse. This presupposes that action often is impulse-motivated, and that some impulses can be resisted whereas others cannot. "Sanity" apparently is a necessary prerequisite if an individual is to be able to resist impulses (especially anti-social impulses).

³¹ Note 29 *supra*.

³² Special measures may be employed when it is suspected that a defendant is falsifying information—for example, special interviewing techniques; see G. DUDYCHA, *PSYCHOLOGY FOR LAW ENFORCEMENT OFFICERS* (1955); and polygraphic lie detection measures; see Lindsley, *The Psychology of Lie Detection*, in *id.* at 98.

with regard to the purpose for passing sentence. Free agency, as already discussed, indicates potential autonomy from the environment.

Consider the case of the "truly sane" criminal who was in full possession of his faculties at the time of his crime.³³ Like any non-criminal, he should be viewed as no less a free agent. That is, his behavior can be viewed just as autonomous from his environment as a so-called "normal" person. Thus, even though a sentence is passed on him, he is presumably also just as capable of being independent of the consequences of that sentence as he was of any other features of the environment which impinged upon him prior to and during the time of his capture. Obviously, if the sentence is the result of a "serious" crime, then one consequence probably will be removal of the offender from the environment of non-criminals. Presumably, this may serve the constructive purpose of ridding a society of behavior which may be both directly injurious to it as well as a source of imitation and undesirable influence upon the more impressionable. (It should be noted that this latter argument could be only proposed by one who believed in determinism.)³⁴ But obviously, many sentences are passed which are not designed to remove the offender from functioning in a normal society. Indeed, many of these latter sentences seem designed to foster a more acceptable adjustment for the law violator within the normal milieu. But what is the rationale for such sentencing from a free agency point of view?

Consider, for example, a sentence which involves the imposition of a large monetary fine. Assuming a true violation of the law has occurred and that the proper person has been apprehended, what effect is this fine supposed to have within a free agency model? One possibility is that a large fine should serve as an aversive consequence of the behavior that led to eventual apprehension and sentencing. From the standpoint of the modern-day theorist in psychology, a fine indeed might be considered aversive under certain circumstances and, because it is made contiguous with what society adjudges to be maladaptive behavior, one might justifiably categorize a large fine as both a potentially punishing and therapeutic event.³⁵ However, the fine is ultimately therapeutic only if it decreases the likelihood of the person again engaging in that illicit behavior.

But, as we already have seen, the legal system is based on the assumption of free agency. By virtue of that very freedom, an individual within this philosophical framework need not necessarily be responsive to the things which happen in his environment. It therefore would never be possible to make an accu-

33 Interestingly, it is difficult to justifiably argue that any of us are ever "truly sane." This issue revolves around the more basic question of what "normal" mental health really is. Presently, there appears to be no suitable definition (in the sense of achieving a consensus of agreement among experts on behavioral pathology) of normal or abnormal behavior. See Mowrer, *What is Normal Behavior?* in L. PENNINGTON & I. BERG, *INTRODUCTION TO CLINICAL PSYCHOLOGY* 58-88 (1954).

34 Excellent empirical reviews and theoretical analyses of imitation learning can be found in N. MILLER & J. DOLLARD, *SOCIAL LEARNING IN IMITATION* (1941); A. BANDURA & R. WALTERS, *SOCIAL LEARNING AND PERSONALITY DEVELOPMENT* (1963); E. SIMMEL, R. HOPPE & G. MILTON, *SOCIAL FACILITATION AND IMITATIVE BEHAVIOR* (1968).

35 Actually, a little thought will indicate that the behavior of the criminal that is most immediately contiguous (associated) with the large fine may not be the actual anti-social response that should be punished but, instead, the behavior which led to his apprehension by legal authorities. Thus, in point of fact, court sentencing might be viewed as punishment for being caught rather than for the actual criminal misdeed.

rate prediction regarding the effect of any court sentence upon the behavior of the law offender. A criminal may choose simply to ignore the intended purpose of the large fine. It makes no sense to assume the operation of free agency at the time of a crime and the operation of causalism at the time of sentencing. Unless a mediating rule can be discovered to justify such inconsistency, one must adopt either a free agency or a deterministic stance all of the time.³⁶ It should be recognized that no *invariable* behavioral consequence justifiably can be expected from levying any sentence if the free agency doctrine actually prevailed. What then can be the real purpose of sentencing from a free agency point of view? Of interest in this connection is the deduction of Grünbaum that the advocate of free agency cannot “. . . consistently expect to achieve anything better than retaliation by inflicting punishment; for were he to admit that punishment will causally influence all or some of the criminals, then he would be abandoning the basis of his entire argument against the determinist.”³⁷

Now let us look at the opposite side of the coin. How would an underlying behavioristic deterministic philosophy view the role of the sentence and its relationship to the judicial process? It is to be recalled that the determinist views all behavior as a function of the causal events that both precede and occur with it in the environment. In a sense, the environment is a programmer and the organism the (organic) computer. Part of the task of the behavioral scientist is to learn how the organic computer works, what its response capabilities are, and what the most effective input might be. In a major sense, the present status of psychology consists of determining the programming system which most efficiently will maximize behavioral effectiveness. As already mentioned, punishments constitute a major tool in the manipulation and molding of behavior. Indeed, the rather extensive literature on punishment suggests that rapid behavioral changes are possible if, at the time punishment is administered, response alternatives are simultaneously provided which lead to reward, that is, if a reeducation program is simultaneously offered. Hence, for the determinist, punishment can be viewed as an important causal factor which, when incorporated with appropriate amounts of reward that are made response contingent,³⁸ can be used to effectively alter the output of the organism. Again, to quote Grünbaum:

. . . by responsibility the determinist does not mean retroactive blame-worthiness, but rather liability to reformative or educative punishment. Punishment is educative in the sense that when properly administered it institutes countercause to the repetition of injurious conduct. The determinist rejects as barbarous the primitive vengeful idea of retaliatory punishment. He fails to see how the damage done by the wrongdoer is remedied by the mere infliction of pain or sorrow on the culprit, unless such infliction

36 By “mediating rule,” we mean some sort of rationale or logic which reconciles the apparent contradiction that results from assuming free agency in order to determine guilt and determinism in order to levy a sentence.

37 Grünbaum, *Causality in the Science of Human Behavior*, 40 *AMERICAN SCIENTIST* 670 (1952).

38 The phrase “response contingent” refers to situations in which such events as rewards, punishers or other changes in the environment are programmed so that their occurrence is dependent upon the response or responses of the organism.

of pain promises to act as a causal deterrent against the repetition of evil conduct. . . . what does the determinist believe about the application of punishment? From his point of view, punishment should be administered to the person upon whom the decisive motive acted, for that person is the essential junction of causes, and it is he who is likely to cause harm again if unpunished. Thus the doctrine of the determinist does not commit him to punishing the parents or social environment of the culprit for the culprit's deeds, even though they are the basic cause of his conduct. Such a procedure would be of no avail if the aim is to rehabilitate the wrongdoer.³⁹

As Frank⁴⁰ has pointed out, the issue is not whether conduct is determined but rather by what factors it is determined when responsibility is to be assigned. Put rather simply, the determinist would argue that the most effective kind of legal system is one which is geared to maximally incorporate variables of known influence on behavior in such a way as to rehabilitate, reeducate, and otherwise remold the deviant wrongdoer. Unfortunately, a complete extrapolation of laboratory principles to the courtroom would be impractical at the present time. Not only would there be the danger of incorrectness through overgeneralization, but the courtroom provides a context that is as yet uninvestigated as to its effects on behavior. A determinist would opt for an *in vivo* empirical approach to the determination of the particular strategies, methodologies, and procedures that could be most effectively employed in altering unlawful behavior.

The net effect of the suggestions implicit in this development is that by adopting a causalistic philosophical framework, a greater willingness to experiment with variables which may have a permanent ameliorative effect upon the behavior of the law offender should and can be promoted. While this suggestion may sound somewhat coarse and offensive to some, a change in strategy for dealing with the lawbreaker is clearly needed. This contention finds support from the terrifying statistical fact that present legal approaches have not been effective in curbing deviant behavior. We live in a period in which the most rapid rise in criminal behavior in history has been (and continues to be) recorded. The prison and other similar institutions are often all but totally ineffective and, indeed, may even spawn further crime. In many parts of the United States the recidivist rate in penal institutions exceeds 80%.⁴¹ These facts should be sufficient, independent of the logic developed above, to promote novel, inventive, and varying alternatives to the present judicial process in hope of programming (or reprogramming in the case of the convicted criminal) more effective and contributing human beings to our society.

IV. Implications of the Behavioral Approach for Judicial Reform

A. The Law: Definition and Purpose

As mentioned, one way man has attempted to control others has been

39 Grünbaum, *supra* note 37.

40 Frank, *das Kausalgesetz und seine Grenzen*, Vienna, Springer (1932).

41 It should be noted that even in a day of burgeoning statistics, a number of factors prevent accuracy. Thus, some of the values reported in these pages represent conservatively

through the regulatory power of law.⁴² In general, law has been assumed to have an effect upon the behavior of those to whom it is directed as well as on the behavior of the members of the regulatory (governmental) agency itself. Most noteworthy for present considerations is that law specifies behavior. Law is constructed in such a way as to define behavior in terms of its permissible or impermissible impact or effect on others, this effect or impact being the object of governmental control. When breaches of law occur, we are not typically informed of the specific behavior involved but, instead, of the properties of that behavior which were unpleasant or noxious to others. In libel, for example, it is the lack of a correlation between the verbal remarks of the remarker and certain factual circumstances of the remarkee which constitute a violation; in theft legal violation refers to the removal of property; and in battery a violation involves the aversive character of physical injury.

But law does not simply specify behavior. It also carries with it a consequence for the occurrence of certain behavioral effects. As indicated by Skinner,⁴³ law can be viewed as the statement of a contingency of reinforcement maintained by a governmental agency. Hence, law not only constitutes a description of permissible and impermissible behavioral effects, it also includes provision for the perpetuation of permissible behavior and the discontinuation of reactions which are noxious to others. A law, therefore, is a rule of conduct in the sense that it specifies the consequence of certain actions—the knowledge of these consequences being assumed to futuristically “rule” or control behavior.

Law, then, indeed constitutes a means by which man attempts to gain control over others. By delineating and specifying practices which, from the view of the controlling governmental agency, are deemed conducive to furthering the goals of society, and by specifying practices which are the antithesis of these goals, law provides many of the criteria against which our conduct is judged as good or bad. Importantly, while responsible for the formulation of such codes of conduct and personal practices, the regulatory governmental agency typically has not been responsible for the inculcation or teaching of lawful behavior.⁴⁴ Instead, society has been so designed that it is the function of other institutions to instill appropriate information and promote adherence to the rules. As an illustration, the family presumably provides a structure whereby the designation and inculcation of law-abiding practices are instituted to coincide with the early developmental stages of the child. These teachings are augmented both by religious and educational institutions which further support the actions and interpretations of the governmental agencies. As a consequence, although not directly responsible for the propagation and instruction of the public on the fact and the practice of law, the judicial system typically has adopted the stance that “ignorance of the law is no excuse.” However, law-regulative agencies do assume an indirect role in informing the public on legal formality. By propagating information through the news media regarding breaches of the

calculated averages based on a number of sources, including publicized reports from the Department of Justice, the Federal Bureau of Investigation, and randomly selected state correctional divisions.

42 See B. SKINNER, *supra* note 14.

43 *Id.*

44 B. SKINNER, *supra* note 14.

law and its subsequent enforcement, it is assumed that positive educational benefits will accrue. That is, when a law has been violated, effort is made to disseminate information regarding the particular breach and the attendant consequences administered to the violator. The public is thereby vicariously exposed both to the standard and criteria used in the interpretation of law violation as well as the consequences that accrue therefrom.

It is assumed that such dissemination of information provides the basis for inhibiting performances via imitative learning. However, imitative learning may be strongest when one actually can witness the behavior not to be modeled.⁴⁵ Unfortunately, we rarely get a chance to directly witness a violation of law and the consequent mediation of justice. The educational impact of the information disseminated regarding law violation is therefore largely addressed to the verbal and ideational processes of the public. The extent to which information presented via auditory and visual channels influences human behavior needs to be actively researched in the psychological laboratory.⁴⁶

It should be noted that the goals of psychology and the goals of controlling-governmental agencies are not terribly disparate. Psychology has carved for its task an experimental analysis of behavior. The avowed goal of this task is to provide information whereby behavior can be predicted and regulated accurately and efficiently. The goal of law also is to control and regulate behavior.

From the psychologist's point of view, the law, as presently conceived, may be premature. It attempts to accomplish the goal of prediction and control before the data are available pertaining to the effectiveness of the measures designed to regulate the behavior of both the potential and actual violator. It has been argued by the psychologist that experimentation may provide important answers regarding the value or lack of value of certain legal and law enforcement practices and, once empirically established, such information should supply the foundation for effective measures of behavioral control.⁴⁷

B. *The Law: Specific Issues*

1. ADMINISTRATION OF LAW: JUSTICE

Rules and regulations, even though empirically derived and necessary for relative societal tranquility, should nevertheless be formulated in such a way as to promote behavior rehabilitation (if needed) as a consequence of their application. Deviant behavior of any kind and however defined can be viewed

⁴⁵ See A. BANDURA & R. WALTERS, *supra* note 34.

⁴⁶ A beginning in this regard has been made by Bandura, Ross & Ross, *Imitation of Film-Mediated Aggressive Models*, 66 JOURNAL OF ABNORMAL SOCIAL PSYCHOLOGY 3-11 (1963) in their study of the effects of various media on imitative aggression in children. They found that children could be prompted to aggression after witnessing filmed adult aggressive behavior. However, whether simply hearing, as opposed to hearing and seeing, aggressive acts would result in imitated aggression has not yet been empirically evaluated.

⁴⁷ Perhaps this position has not been stated better than in Skinner's latest and most controversial book *Beyond Freedom and Dignity* (1971).

most profitably as a symptom or set of symptoms which require treatment. Given sufficient knowledge regarding the implications of such symptoms, a well-trained judge, when armed with the appropriate empirically-derived information, should be able to diagnose and administer proper treatments (not sentences) for purposes of bringing about whatever behavior change is necessary. An entirely new and radical approach with regard to understanding deviant behavior would appear to be required within the judicial system to accomplish this goal. Massive research programs are needed in order to ascertain the specific rehabilitative treatments necessary for each of the constellation of symptoms that represent defined deviant anti-social behaviors.

Consider just one small example of this approach as suggested in the following analysis. While a traffic violation may appear trivial when compared to the more major crimes that daily confront us on a national and international level, it nevertheless provides a good illustration of the point we wish to make. Let us say that, in the course of his daily routine of cases, a judge is faced with two juvenile offenders who come from the same general area of a large city and who, independent of each other, have committed similar violations. Both seriously exceeded the speed limit and were apprehended after a lengthy pursuit by the police. Further, let us assume that such factors as social class, age, amount of education, and a variety of other possible relevant variables are approximately equivalent for both and that the single major difference is that one of the offenders is a male and the other a female. Now the law is reasonably explicit regarding speeding offenses. In most states repeated violations can result in severe fines, suspension of driver's license, temporary incarceration and, in the case of juvenile offenders, sometimes in commitment to a reformatory-living situation. However, under the guise of presumed equality of treatment for all, the law does not take into account some of the variables that suggest that a different perspective may be necessary for the two offenders. In such an instance, the behavioral scientist conceives of the law as an oversimplification because it basically ignores the complexity, interaction and the possible differential potency of the variables that may have given rise to the violation for each of the two. For example, there is evidence which suggests that a female speeding offender should be treated quite differently than a male who commits a similar crime. Speeding among males is quite common and even repetition of serious speeding offenses is not necessarily to be viewed as deviant or abnormal, especially within certain U.S. subcultures. On the other hand, excessive and repetitious speeding by a female is quite uncommon, especially for persons raised within the middle class, thus qualifying it as a highly unusual event in this case. While considerably more research is needed before one can conclusively validate the possibility that speeding by males and females is correlated with quite different personality patterns and that the two sexes may therefore require different treatments for similar violations, the implication is that such data could be invaluable for the judge whose goal is rehabilitation as well as the protection of society. In the case of the boy and girl speedsters, it may well be that the judge would be justified in quite different treatments for each.

What should be salient in the mind of the judge who administers sentences

and/or treatments is that, although two individuals may break the same law, the differences in their personal histories and environments may dictate that they be handled differently. A sentence which has educative and rehabilitative value to one offender may be highly injurious to another.⁴⁸ Although the modern-day judge intuitively may give weight to some of the background factors in reaching his decision, his analysis at best can be based on a very limited set of subjective experiences due to the limited data available. Obviously, only an extensive empirical analysis can provide solid answers as to how to proceed in such cases.

In a similar vein it appears that the nature and severity of a penalty inflicted on a lawbreaker are often determined by how nocuous society finds the deviant behavior and is independent of considerations concerning the potential modifiability of the behavior in question. Although a convicted murderer, therefore, usually incurs a stronger sentence than a petty thief, it may well be that the former is much more capable of rehabilitation than the latter. At present there is sparse literature on this subject thus leaving open the question of whether there is a strong relationship between degree of "deviancy" of an illicit behavior (as defined by its "repugnance" to society) and the offender's capacity for rehabilitation.⁴⁹ Indeed, the whole issue of degree of deviancy, which is determined solely by non-empirical procedures, is brought into question. It could be, therefore, that research regarding the potential for rehabilitation might well also precipitate or at least accompany a reevaluation of the present intuitively-based criteria which are employed to determine the seriousness of a crime.

The major conclusion emerging thus far from this discussion is that multiple revisions of the judicial system are necessary. New guidelines, founded upon a carefully conceived empirical foundation, are required. Extensive correlational and statistical data are needed regarding the types of causes (environments) which lead to illegal acts (symptoms) and the probability of future reoccurrence of such illicit behaviors once they initially occur. In addition, research regarding the efficacy of various rehabilitative methodologies is required. In order to tailor effective measures of behavioral control to particular deviant symptomatology, extensive data is needed regarding the efficacy of both novel as well as established treatment plans.

In essence, we argue that justice should be a matter of empirical analysis rather than solely of armchair speculation steeped in untestable philosophical presumptions.

48 This analysis is consistent with the principles of relativity in science. In psychology the relativity notion is nowhere better illustrated than in the paraphrased statement ". . . what is one man's meat may well be another's poison. . . ." Translated for the present context, what may be pleasant or useful to one organism may, by virtue of differences in past history, be quite punishing to another individual. For example, some people have learned to appreciate the virtues of Limburger cheese. Thus, this could serve as a reward (motivation) for their behavior. On the other hand, Limburger cheese can be a strong punishment for many people.

49 Frequently the petty thief has a long and repetitious history of similar criminal behavior, and often is characterized as psychopathic-like in his adjustment. In contrast, the act of murder is often associated with a moment of passion or some sort of long-term but increasing disturbance in a relationship culminating in a transient loss of emotional control. The latter is more neurotic-like. Interestingly, clinical psychologists generally find the psychopathically disordered individual much less amenable to treatment than the neurotic.

2. ADMINISTRATION OF LAW: EFFECTS

a. *Penal Reform*

One of the most widely employed of the available consequences that can be levied against an offender is incarceration in one form or another. For major or repeated offenses a penal sentence is often imposed. Presumably, the net effect of penal incarceration is that it (a) protects society by removing a threatening person from its midst as well as (b) institutes measures to rehabilitate the offender for his eventual return to the society. As previously mentioned, the prognosis for success under the present system is incredibly dismal. Nevertheless, penal sentencing remains high on the hierarchy of so-called treatment regimens administered by the court to offenders against society.

We would suggest that a behavioral analysis has much to offer in the way of increasing the probability of successful rehabilitation. The penal institution should be an extension of the rehabilitative philosophy of a deterministically-oriented court. It should be a vehicle through which the law breaker becomes reeducated and resocialized. Every known principle of behavior control and prediction should be actively endorsed and humanely utilized by those who are involved in penal administration.⁵⁰

Major advances in the use of the institutional setting to produce behavioral change have been made in recent years.⁵¹ This especially has been true in the case of the mentally disturbed person.⁵² Restructuring and programming the environment within the walls of the institution so that unsystematic means of administering reinforcement (reward and punishment) are minimized and the educative (behavior change) effects resulting from systematically-dispensed rewards and punishments are maximized has produced spectacular results in some instances. By increasing the systematicness with which rewards are dispensed for certain behaviors and by instituting extinction (withdrawal of rewards) and punishment procedures for others, it has been possible to alter the behavior of the seriously disturbed and deviant human beings, often within short periods of time.⁵³ Within the programmed institutional environment, literally speaking,

50 In no sense do we offer as a panacea that which is to follow. A program of penal reform should be undertaken in much the same way as experimentation in science. New educational techniques (like experimental hypotheses) need to be formulated, implemented, evaluated and, if necessary, discarded.

51 See T. ALLYON & N. AZRIN, *THE TOKEN ECONOMY* (1968).

52 See L. ULLMANN & L. KRASNER, *CASE STUDIES IN BEHAVIOR MODIFICATION* (1966); and L. KRASNER & L. ULLMANN, *RESEARCH AND BEHAVIOR MODIFICATION* (1967).

53 See Ayllon, *Intensive Treatment of Psychotic Behavior by Stimulus Satiation and Food Reinforcement*, *BEHAVIOR RESEARCH AND THERAPY* 53-61 (1963); Ayllon & Michael, *The Psychiatric Nurse as a Behavioral Engineer*, *JOURNAL OF THE EXPERIMENTAL ANALYSIS OF BEHAVIOR* 323-334 (1959); and Wolfe, Risley & Mees, *Application of Operant Conditioning Procedures to the Behavior Problems of an Autistic Child*, *BEHAVIOR RESEARCH AND THERAPY* 305-312 (1964). Stripped of study-to-study variations the basic procedure for these reports involved: (a) selection of either one or more specifiable and, hence, measurable maladaptive responses (symptoms), (b) systematic controlled observation by independent judges of the rate and pattern of occurrence of these symptomatic behaviors prior to "treatment," (c) institution of the "treatment" which usually consisted of dispensing some type of reward or punishment procedure in a systematic and consistent fashion contingent upon this (these) response(s) in order to (d) bring about a major change in the frequency of the undesirable behavior. By keeping a moment-by-moment or day-by-day record of the behavior, it is possible to graph, in cumulative fashion, the rate of emission of the response(s)-to-be-changed

it no longer pays for the mentally disturbed person to maintain his bizarre and maladaptive response systems or life style because such reactions no longer elicit rewarding or sympathetic responses from people around him. His deviant behavior often is not punished in the traditional sense but, instead, is simply ignored. The extinction of such undesirable behavior is, however, but one aspect of the full treatment regime. While decreasing the frequency of undesirable behavior by means of extinction procedures, desirable, "sane," appropriate responses simultaneously are being rewarded. Moreover, these behavior-modification programs often have resulted in a high incidence of hospital release of patients who have been diagnosed as criminally ill.

Similar programs must be instituted within the walls of the prisons of our country if we are to realize any hope of progress in that area.⁵⁴ Ideally, in instituting such a program, the setting of the prison no longer can be detached or isolated from the outer society but must approximate in miniature that environment to which the inmate will return upon his release. Present research indicates that this approach will increase the probability that the inmate, upon his return to society, will continue to engage in the appropriate response patterns that were rewarded within the institutional environment.⁵⁵ It is the thesis of this paper that until psychologists are supported in their efforts to restructure and gain control of the penal environment for purposes of systematic behavior change, society will continue to reap the undesirable consequences of the high rates of recidivism and serious crime (an 18% increase in 1969 over the previous year).

in order to determine the effectiveness of the "treatment." Usually, this record takes the form of a graph which provides immediate visual feedback to the investigator as to whether his treatment is working. Such an approach has produced dramatic changes in behavior in the form of a precipitous reduction in the symptoms of mentally disturbed patients, a marked increase in more efficient behaviors of exceptional children (e.g., the retardate, the stutterer, etc.), etc.

⁵⁴ On a highly limited basis, some programs of this nature have already been tried. Even on a limited basis, the results have been, to say the least, highly encouraging. See Cohen, Filipczak & Bis, *A Study of Contingencies Applicable to Special Education*, CASE I, EDUCATION FACILITY PRESS, INSTITUTE FOR BEHAVIOR RESEARCH (1967); *Token Reinforcement Procedures in a Home-Style Rehabilitation Setting for "Pre-Delinquent" Boys*, JOURNAL OF APPLIED BEHAVIOR ANALYSIS 213-223 (1968).

⁵⁵ As noted by three prominent students of behavior modification procedures (R. ULRICH, T. STACHNIK & J. MABRY, CONTROL OF HUMAN BEHAVIOR (1970)), "The function of our various types of penal institutions is a subject of considerable social concern. Psychologically, jailing an individual for a crime after several months of legal proceedings have elapsed is too unwieldy and slow to be an effective punishment—and there is no evidence that time in jail is a deterrent to undesirable behavior. In fact, just the opposite occurs; jailing a youth with practiced criminals, it is said, is a particularly efficient way to insure his continuing criminal career. Jails are the universities of crime where outlaw skills are communicated through association with other prisoners. Recent years have seen some desire to end the insidious cycle of criminal offense, jail, education, release, criminal offense. Rehabilitation during humane detention seems to offer a better chance for prevention. In the long run, this tack will be morally, socially, and economically cheaper than our present system. . . . The teaching and shaping of effective social and educational behavior increase(s) the attractiveness of the individual to the noncriminal community, thus enlarging its control over him and enhancing his chances of a lawful, rewarding existence."

b. Parole Reform⁵⁶

A parole system can be used in two ways. The first and more traditional way has been as a follow-through supervisory program for the offender who has just served a prison term. The second way also involves the parole agency in an overseer role but where the offender directly is placed in the custody of the agency in the community thereby bypassing penal incarceration. Presumably, one major function of parole is to provide a continuous monitor of the subject's behavior. Apparently, parole also serves the purpose of insuring that the subject will refrain from additional breaches of the law by imposing the constant threat of an immediate imprisonment if a further violation is detected.

But, like the present penal system, parole does not work.⁵⁷ It is apparently just as ineffective in reducing or stemming crime as any other of the several similar approaches discussed above. However, from a behavioral standpoint, parole indeed could be an effective deterrent to further crime. Conceived behavioristically, parole should be an extension of the modification program initiated in prison. Now, however, the restructuring is accomplished *in vivo*; that is, in the subject's actual living situation. Consistent with several principles derived from laboratory research, teaching the law offender more constructive habits and responses while he remains in a setting identical to the one where he will live out his lifetime should increase the probability of such rehabilitation being permanent.⁵⁸

Put in this manner, parole should constitute far more than a monitoring and fear-producing retaliatory system. It should involve the clever and systematic manipulation of reward and punishment contingencies in such a way as to lead the law violator away from criminal responses and toward a more satisfactory social adjustment.⁵⁹ This means that active and substantial control of the subject's environment is required. Such a restructuring does not mean that a monitoring of behavior is not desirable. Indeed, part of restructuring the subject's environment should entail a provision for considerably more information regarding his progress and adherence to appropriate behavior patterns than is presently obtained.⁶⁰ Moreover, steps should be taken to provide immediate

56 Parole has been defined as "a method of selectively releasing an offender from an institution prior to the completion of his maximum sentence, subject to conditions specified by the paroling authority, a method whereby society can be protected and the offender can be provided with continued treatment and supervision in the community." NATIONAL CONFERENCE ON PAROLE, *PAROLE IN PRINCIPLE AND PRACTICE* (1957).

57 See H. TOCH, *LEGAL AND CRIMINAL PSYCHOLOGY* 182-83 (1961).

58 While the authors know of no such plan presently in operation, it is important to note that there have been many successful uses of behavior modification programs in the natural setting designed to control behaviors other than that of anti-social activity. See THARP & WETZEL, *BEHAVIOR MODIFICATION IN THE NATURAL ENVIRONMENT* (1969).

59 Tharp & Wetzel, *id.*, discuss programs which could be carried out in natural settings for a variety of deviant or disordered behaviors. Their approach adopts the technique of *contingency management*, defined as "the rearrangement of environmental rewards and punishments which strengthen or weaken specified behaviors." Following the development of an adequate rationale based on a review of relevant research and "the articulation of the theoretical material," their book evolves into a "how-to-do it" manual (especially Chap. 5 and 6). Chapter 7 details difficulties and pitfalls of their behavior modification approach and Chapter 8 evaluates the results of their suggested procedure as implemented in their own projects. As Tharp & Wetzel state, "the results appear to compare quite favorably with any heretofore presented on such a population (i.e., the predelinquent child)."

60 *Id.*

feedback to the subject as to the success and fruitfulness of his or her responses.⁶¹ If the individual to be rehabilitated does change under a given rehabilitation program, immediate environmental changes should be instituted so that control over his behavior is not lost. As such, parole should be viewed as serving the same purpose (basically, in the same way) as institutional living with the single exception that the environment is functionally more parallel to that in which the subject will ultimately live permanently. There should be no less emphasis on behavior control and alteration. Every conceivable effort should be made to utilize reward and punishment contingencies that naturally occur in the environment in order to manipulate, alter and maintain more constructive behavioral outcomes. Token systems such as those described by Ayllon and Azrin⁶² involving reward, additional freedom, etc., should be made contingent on the subject's behavior.⁶³

In the case of juvenile offenders, removal from the home, foster care placement, and a variety of other situations which traditionally have been employed could be expanded to incorporate the more systematic and careful application of behavioral techniques as a tool for change. Training programs should be instituted to teach behavior principles to parents, foster parents and other members of the community who come in contact with the subject.⁶⁴ The goals of such a program would be to inculcate the principles of behavior modification, systematic dispensation of reinforcement, and other tools necessary for a more effective behavior control. No stone should be left unturned in bringing about change sufficiently radical to promote immediate and new behavioral actions on the part of the law violator.

V. Specific Contributions Psychology Can Make to the Law

A. Areas Traditionally Viewed as Most Appropriate for Contributions from Psychology

Obviously, the law itself has considerably greater breadth than that portion or branch which is responsible for the administration of justice to the criminal

61 The term "feedback," as used here, refers to consequences of the response for the subject. As has been shown in a good number of studies, knowledge of the effects of one's response often, itself, can serve as a reward or reinforcement.

62 THARP & WETZEL, note 58 *supra*.

63 A token economy basically consists of structuring the environment so that administration of symbolic substitutes such as points or poker chips are used as rewards, and their removal as punishments. The advantages of such a procedure include the convenience and efficiency of rapid and immediate delivery of rewards and punishments contingent upon the response(s) to be changed. Not only can such tokens be accumulated and traded in for more basic goods, but their rapid availability and/or delivery provide immediate knowledge of results (i.e., "feedback"). This emphasis on the immediacy of reinforcement stems from a large body of literature which indicates that the longer the delay in reward or punishment following the response, the less effective either are in altering that behavior.

64 The use of non-professionals in behavior modification programs has been highly successful. Beginning with the very important report of Allyon & Michael, *The Psychiatric Nurse as a Behavioral Engineer*, JOURNAL OF EXPERIMENTAL ANALYSIS AND BEHAVIOR 323-334 (1959), the successful use of non-professionals has been on the precipitous increase. As Tharp & Wetzel state: "the weakest aspect of contemporary therapeutic theory and technique . . . is the failure to guide the non-professional person in helping people. . . . There have been some pioneer explorations in mental health deprofessionalization . . . (such as) . . . training

offender. The broad areas of civil action, corporate tax, etc., probably represent, when taken together, over two-thirds of what generally constitutes the umbrella of legal domain. Traditionally, the psychologist has seen his major contribution in the areas of civil and criminal action where the human behavior of the defendant and witnesses is more obviously under scrutiny (and often in question). Psychologists and psychiatrists have served as expert witnesses in cases ranging from those pertaining to the determination of sanity and emotional (mental) competence to those involving the legitimacy of eyewitness testimony in civil and criminal proceedings. As a so-called expert witness, the psychologist or psychiatrist is usually asked for an opinion regarding either the character of the defendant (or the witness) or regarding the plausibility of various kinds of verbal reports given on behalf of or against the defendant.⁶⁵

More recently, psychologists have been involved in probate matters. For example, in the case of an ambiguous will or where a will is in dispute, psychologists have occasionally been called upon to conduct post-mortem examinations of the supposed or presumed intentions of the deceased in order to determine how the inheritance should be allocated. Such practice has apparently been especially prevalent in the case of suicide where the mental and emotional stability of the deceased was clearly in question.⁶⁶

The fact that psychologists traditionally have not been involved in aspects of the law outside of the courtroom does not preclude their usefulness in other areas. Any instance in which human behavior is involved provides a conspicuous target for the analysis by and the contribution of the psychologist. At one point or another human behavior is involved in virtually every aspect of the law. Men and women are required to do legal research, to compile information, to prepare manuscripts and, ultimately, to interpret this data in a manner congruent with the construction of the law. At each and every point in this legal chain where human endeavor is involved, the actions of human beings can have an effect on the outcome. That this is the case is evident from a large and relatively recent body of research regarding the role of "experimenter bias" in psychology.⁶⁷ The attitudes, preconceptions, and probably the personality of the person conducting virtually any kind of research can have a profound effect on the outcome of the results of that research quite independent of the focal variables involved.

The purpose of this section therefore is to more carefully evaluate only the

housewives to function as psychotherapists in a large Eastern city, (and) bartenders . . . to recognize certain symptoms and disturbances in their customers and to refer them to appropriate sources of help. Clergy, teachers, and others are often given training in how to deal with rather simple problems, how to recognize the more serious ones and how to refer persons to the appropriate sources for treatment."

65 "The data of experimental perceptual psychology have established quite securely that no two individuals observe any complex occurrence in quite the same manner; that the ability of different individuals to retain and to recall observations differs; that the elements which are retained and recalled are influenced by past experience and attitudes; and that the ability of various individuals to express what they have observed and how it is retained and recalled varies greatly. There is no wholly reliable witness since the observation of all witnesses is faulty in some degree and some situations." Loevinger, *Prefatory Remarks*, in J. MARSHALL, *LAW AND PSYCHOLOGY IN CONFLICT* (1966).

66 Schneidman, *You and Death*, 5 *PSYCHOLOGY TODAY* 43-45 (June, 1971).

67 R. ROSENTHAL & R. ROSNOW, *ARTIFACT IN BEHAVIORAL RESEARCH* (1969).

traditional areas in which psychology can and has contributed to the law, but also to explore new areas.

B. Interpretation of the Law

We have already described some of the functions that the law serves as it relates to the present legal frame of reference. Unfortunately, because much or all of our present law derives probably from a combination of philosophical and authoritarian-derived supposition and expedience,⁶⁸ little in the way of systematic empirical analysis pertaining to the derivation, implementation and effects of law has been conducted. Particularly, little attention has been paid to the subjectivity of law. The personal bias of the legislator in the determination of what should become a regulation is undoubtedly important. More important is the probable influence of the idiosyncratic frame of reference each judge holds regarding the administration of the law. For example, consider the nominal evidence that suggests that judges with divergent personalities can interpret the law quite differently, and, consequently, often administer it in highly variable and diverse ways even in the presence of similar circumstances.⁶⁹ In addition, there are at least two different ways in which the administration of law seems quite independent of the behavior of the offender. First, because of ambiguity of wording and, consequently, of interpretation, there are a large number of situations in which the same law can be employed to handle widely differing behavioral events. Second, there are recorded circumstances where different laws can and have been employed to regulate the same behavior. What is the empirical data regarding these apparently inconsistent practices? Do these disparate practices reflect the differences of interpretation involved in tempering justice with mercy; are they the outcome of the different personalities of judges, or are they the result of vague and poorly articulated laws?⁷⁰ Unfortunately, justice by way of the law may not often be only a matter of objectively insuring that society's rules and regulations are observed but may also involve satisfying the idiosyncratic needs of those who are in a position to administer those rules.

68 See B. SKINNER, *SCIENCE AND HUMAN BEHAVIOR* 333f (1953).

69 Haines, *General Observations of the Effect of Personal, Political and Economic Influences in the Decisions of Judges*, 17 *ILL. L. REV.* 96-116 (1923) found that the proportion of similar cases dismissed ranged from 6.7% for one judge to 73.7% for another. One magistrate discharged 18% of his disorderly conduct cases and another, 54%. Haines argued that the huge spread between the sentencing behaviors of different judges probably could be attributed to differences in personality factors. Another study reported "criminal courts in Chicago today . . . twisting the law and inventing fictions to obtain results they regard as just." J. HALL, *THEFT, LAW AND SOCIETY* 264 (1935).

70 Notwithstanding these possible sources of variability in the administration of the law as it now stands, some legal scholars have suggested the possibility that law someday can be made almost as precise as geometry. H. CAIRNS, *THE THEORY OF LEGAL SCIENCE* (1941). Justice Frankfurter (*Some Reflections on the Reading of Statutes*, 47 *COLUM. L. REV.* 527-46 (1947)) has urged repeatedly that the message of the statutes is clear and that judges should do as the statutes suggest. Justice Frankfurter's statement is in contradiction with a huge body of psychological literature indicating enormous variability in the ability of even trained people to discern and consensually agree upon implicit meanings that may be contained in written statements and passages. Such variability of responses can even occur when ambiguity has been reduced to what appears to be an absolute minimum. See R. ROSENTHAL & R. ROSNOW, *ARTIFACT IN BEHAVIORAL RESEARCH* (1969).

From a behavioral point of view, law should be functional. That is, it should be established and administered in such a way that it effectively regulates behavior in a consistent manner which is both efficient and fruitful for society and for as many individuals as possible within that society. This suggests a distinctly adaptive and use-oriented flavor in both the derivation and the administration of law. Justice should be redefined, by this approach, to be the product of an empirical rather than of a subjective or armchair analysis.⁷¹ For example, various approaches to the formulation and application of laws could be tried experimentally. The criteria for continued adoption could include, among other things, consensual public acceptance and objective adherence thereto. Laws, therefore, should be formulated in such a way as to be maximally conducive for behavioral stability (i.e., good "mental health"). Further, embodied within each and every law should be the requisite for measurement of its desired behavioral effect.

C. *Satisfactory Versus Unsatisfactory Evidence as the Behaviorist Views It*

As mentioned, psychiatrists and psychologists frequently are called upon to determine the emotional stability and/or behavioral capabilities of persons who may exhibit potential behavioral disfunction. The psychiatrist and psychologist (especially the psychiatrist) are considered to be scientific experts whose special province is the "mind" or the personality. These experts are typically viewed as possessing special tools and skills which allow them to examine the "contents of the mind" much in the same way that the endocrinologist may examine the content of the blood for the presence of hormones. However, there are major differences between the psychiatrist and the endocrinologist. These differences primarily revolve around the ability of the former to explore what broadly might be termed private consciousness or experience.

How can one know the contents of someone else's mind? What are the "tools" that allow one to examine the structure of someone else's personality and/or thought processes? And, finally, what characteristics must one possess in order to be deemed an expert in the area of "mind probing"?

Unfortunately, the mind is not like the blood or some other substance which can, under prescribed circumstances, be dissected, analyzed, or fractionated.⁷² As yet, because of this lack of a substantive basis, it has not been possible to produce a precise and unambiguous definition of the mind. These factors obviously pose problems for the psychiatrist in his "mind-probing" attempts that are qualitatively different from those confronting the endocrinologist. Those who examine the mind, therefore, are forced to resort to presumed indicants or re-

71 This approach is embodied in a model presented by Skinner for designing new cultural patterns. Skinner, *Freedom and the Control of Men*, 26 AMERICAN SCHOLAR 47-65 (1956). The formulation of law should, in many ways, resemble the designing of an experiment. Skinner states ". . . in drawing up a new Constitution, . . . many statements must be quite tentative. We cannot be sure that the practices we specify will have the consequences we predict, or that the consequences will reward our efforts. This is in the nature of such proposals. They are not value judgments—they are guesses." The results of our tentative formulations should be constantly monitored and resulting information compared with our original intent. As a consequence, our legal system should continually be engaged in the process of being retailored, sharpened and improved.

72 See P. BRIDGMAN, *THE WAY THINGS ARE* (1959).

flections of the outcome of thought processes or cognitions. That is, it is necessary to study the so-called *manifestations* of the mind which, in turn, are assumed to be the mirror image or reflection of its workings and function. In some instances more than one indicant is examined. For example, a subject may verbally report the presumed workings of his consciousness as one manifestation, and this verbalization can then be compared with other forms of behavior such as the overt responses and interpersonal interactions of the same subject. One can then examine these two (or more) forms of behavior to determine if there exist any discrepancies or incongruities between them.⁷³ In both the latter case and in instances where only a single form of behavior is available as a presumed reflection of the mind, comparisons sometimes can be made between that behavior and established standards for normal performance. Discrepancies between the behavior of an individual from that of the population of which he is a part can then presumably be taken as an indicant of his adjustment, the accuracy of his perception, etc.⁷⁴

Note, however, as one analyzes the process by which the psychiatric expert approaches his task, it can be seen that his focus is not on the mind after all, but on the behavior of the subject under scrutiny. Indeed, an even more careful examination of the process involved in psychiatric and/or psychological screening reveals that the "mind" is a summary or higher-order term which simply is used as a substitute for the behavioral examination which is conducted. The first step, then, toward an objective examination of a witness or defendant is to focus exclusively on the various behavioral indicants (in the interests of reliability, on as many indicants as one can obtain) made available to the examiner. As developed in preceding sections, it is the behavior of the subject, after all, which qualifies him either as a witness or as a defendant.

A common objection to the development of this behavioral approach is the assertion that the "mind" is the cause of behavior and therefore should still remain the focal subject of scrutiny. Since, by this latter reasoning, the motives, characteristics and other determining factors of a person are presumably contained within the mind, behavior continues to remain just a reflection of this more important but unobservable substrate. In answer to this objection, it must be reemphasized that a precise definition of the mind has not yet been formulated by either the psychiatrist or psychologist. Hence, even if this sup-

⁷³ Interestingly enough, this provides the basic model of the courtroom lawyer. By first clearly establishing what the defendant or witness says happened, the lawyer then attempts to bring out contradictory (or confirmatory, as the case may be) observations derived from the testimony of other witnesses in an attempt to refute (or support) the verbal behavior of the subject in question. Discrepancies or contradictory evidence often proves embarrassing to those involved in giving testimony. Similarly, the psychologist is often confronted with discrepancies between verbal and other overt manifestations of behavior on the part of a subject or patient. For example, a subject in an experiment may decry that "this coffee tastes terrible" while eagerly gulping it down, or a patient may vigorously condemn pornography in public while, in the private sanctity of his den, he covertly reads copious amounts of such literature. These latter pose at least as much difficulty for the psychologist who wishes to account for the behavior of his subjects (or patients) as to the lawyer who wishes to establish a convincing and unambiguous defense for his defendant.

⁷⁴ For an analysis of problems of this sort see J. MARSHALL, *LAW AND PSYCHOLOGY IN CONFLICT* (1966).

position regarding the mind as a causal agent were true, it would still not be possible to examine directly that which is as yet undefined.

It therefore follows from this analysis that a psychiatric or psychological expert would be best characterized as one who should be sophisticated regarding the methods and procedures underlying behavioral analysis. He is one who should be familiar with the data pertaining to the variables which influence behavior and the conditions and circumstances under which certain responses are likely to occur. He is one who should interpret personality, motives, and other uniquely human facets in terms of demonstrably influential behavioral variables. He should recognize that attitudes, prejudices, biases, and moral judgments are all summary terms used to describe different kinds of behavior, most or all of which have been acquired through learning. He should be familiar with normative statistics, cultural and subcultural differences, the role of developmental variables, and have at his fingertips data from a variety of other important areas related to the ontogeny, maintenance, and manifestation of various behavioral syndromes. Most of all he should be aware of the limitations of human judgment. He should recognize that without empirical validation, his own judgments are of worth only if he is capable of accurately extrapolating and generalizing from the laws of behavior to the particular circumstances which confront him. He should be both guarded and highly leery of pseudoexplanatory, mentalistic and cognitive constructs and use them sparingly, if at all. Instead, he should seek to determine the similarities between the specific situation that confronts him and the conditions under which the behavioral laws which he relies upon were evolved and developed. Above all, he should rely *exclusively* upon the behavior of the subject under examination for his data and avoid his tendencies to make inferences, assume hypothetical states of the mind, or rely on unvalidated techniques for his conclusions.⁷⁵ He should look for similarities between the circumstances under which the behavior in question occurred and the kinds of variables known to be effective in producing similar kinds of reactions under the more controlled conditions of the experimental situation.

Consider the following illustration. Let us suppose that, in the course of a conversation, John Doe revealed fears that he is being followed by persons who intend to force him into unusual and dangerous acts. Upon further questioning you discover that John Doe suspects that his persecutors constitute virtually all persons in his immediate vicinity. You immediately suspect that John Doe is not the victim he perceives himself to be, but that he is actively delusional instead. You decide, both for the sake of John Doe and the community in which he lives, that he should be examined by the court to determine whether he is a "fit and proper"⁷⁶ person to continue residence in the community.

In response to your petition, the court summons a psychiatrist to examine

75 It always has been of some interest to the authors to note how psychiatric and psychological experts can, on the one hand, examine the subjective and prejudicial views of key trial figures in pretrial interviews but, on the other hand, absolve themselves of the same basic human characteristics in presenting their views to the court.

76 The phrase "fit and proper" obviously allows great leeway to the psychologist and psychiatrist as far as their power in civil commitment is concerned. Dershowitz, *The Psychiatrist's Power in Civil Commitment: A Knife That Cuts Both Ways*, 2 *PSYCHOLOGY TODAY* 42-47 (Feb. 1969), discusses this issue.

John Doe. The basic question asked is whether or not John Doe is a "fit" person or whether, because of his apparent mental disorder, he might be viewed as a danger and a menace to the community. Because the psychiatrist is viewed as an expert in performing analyses of the mind, his opinion or judgment will undoubtedly have a serious consequence for John Doe's freedom and/or for the safety of the community. Clearly, John Doe's behavior was substantially different from most people. His verbalizations regarding the plotting and persecutions of others were clearly discrepant from the actual behavior exhibited toward him by those he accused. But since John Doe was guilty only of verbal behavior which was incongruent with expected norms, upon what basis can the psychiatrist render a judgment regarding the man's capacity to commit mayhem or to be harmful to himself? That is, what is the evidence (empirically derived facts) upon which a psychiatrist can render an opinion? Obviously, it might be possible to engage John Doe in a series of questions and answers and, from this data, infer his potential as a harmful being in the community. But what about the validity of this procedure? Surely, a short question-and-answer session represents only a minute sample of the total behavioral repertoire of John Doe, and constitutes an exceedingly flimsy foundation upon which to base a diagnosis which might permanently affect the man's future and/or the future of the community in which he resides.

The question of concern here is what constitutes satisfactory versus unsatisfactory psychological evidence. We have just given a hypothetical example of a typical case that often confronts the court, and we are attempting to determine from the available evidence what to do with this individual. Interestingly, the total evidence regarding John Doe was his verbal statements and the verbal statements of the petitioner.⁷⁷ From this information a decision must be made regarding the future probability of his assaulting others or doing personal injury to himself. In other words, a decision which may affect this man for the rest of his life will be based, in part, upon events which may or may not happen, but definitely have not happened yet. Even though given only minimal evidence, the psychiatrist and/or the psychologist is forced to make an important decision; he is asked whether a given harm is likely, and he must generally answer yes or no. Presumably, to arrive at this decision he is forced to weigh the evidence that he obtains from the subject's "mind" through examination of his behavior. Because of the importance of his decision, the expert may request supplementary data from the subject's past history and may administer a battery of tests for purposes of diagnosis and classification in hopes of rendering a more accurate prediction of future behavior. Unfortunately, even after obtaining this information there is virtually no available evidence, in the sense of empirical data, upon which a psychiatrist could base a prediction regarding the potential threat that the patient represents either to the community or to himself.

It is at this juncture that our position must be stated as strongly as possible. In the absence of sound research data which would allow actuarial prediction

⁷⁷ "It seems never more obvious than in situations like this that cases rarely if ever are decided on the facts since only evidence is available to the courts and . . . this is simply a secondary indication of the facts." Vinger, *Facts, Evidence and Legal Proof*, 9 W. RES. L. REV. 154 (1958).

of future behavior based on that exhibited previously by the subject (which either could be verbal report, overt action, test behavior, or all of these responses), the only thing left to the psychiatrist is his own personal interpretation of the subject's behavior and his preference regarding community safety and the value he places on personal liberty.⁷⁸ Satisfactory evidence, therefore, is evidence derived empirically (and carefully) through either experimental manipulation or a correlational procedure. Anything less than that allows too much room for the subjective biases of the diagnostician, which in turn may be instrumental in determining the fate of the person under observation.

D. Accuracy of Statements Made by the Psychiatrist and Psychologist

The psychiatrist or psychologist, as an expert witness, may be called upon to make either postdictive or predictive statements. For example, the perception of a witness may be at question in a criminal case. Because of possible motivational and perceptual influences, the opposing attorney may question the validity of the witness's testimony. A psychologist, therefore, might be called to testify regarding the probable accuracy of the statements made by the witness. Since the event that is being challenged has often already occurred, psychologists must testify in the capacity of a person who is an expert at postdiction.

Yet another kind of statement is also frequently required of the psychiatrist or psychologist. This particular kind of statement relates to an illustration given in the preceding section. Here, the defendant is brought before the court for purposes of making a determination regarding the quality of his or her future behavior. Presumably, these statements are based upon a careful analysis of the present and past behavior of the subject as well as upon an attempt to relate these behaviors to laws governing behavior in general. Armed with this information, the psychiatrist or psychologist then attempts to formulate a prediction. Obviously, when postdiction is involved, a test of the accuracy of the psychologist is difficult, if not impossible. In contrast, predictions often can be evaluated to determine their accuracy.

1. ACCURACY OF STATEMENTS MADE BY THE PSYCHOLOGIST OR PSYCHIATRIST WHEN DESCRIPTION AND POSTDICTION ARE INVOLVED

If there is any rule of thumb to which this article has been dedicated it is that the statements of the psychologist are most valid when they conform to data

⁷⁸ Perhaps the most convincingly outspoken critic of the use of clinical inference to diagnose people is Paul Meehl: CLINICAL VERSUS STATISTICAL PREDICTION (1964); *Wanted—A Good Cookbook*, 11 AMERICAN PSYCHOLOGIST 263-72 (1956); *A Comparison of Clinicians With Statistical Methods of Identifying Psychotic MMPI Profile*, 6 JOURNAL OF COUNSELING PSYCHOLOGY 102-09 (1959); *Some Ruminations on the Validation of Clinical Procedures*, 13 CANADIAN JOURNAL OF PSYCHOLOGY 102-28 (1959); *Seer Over Sign: The First Good Example*, JOURNAL OF EXPERIMENTAL RESEARCH IN PERSONALITY 27-32 (1965). Based on literally dozens of well-controlled studies, Meehl concludes that the subjectivity of clinical prediction sometimes is so bad that the public might be better off to pay the professional not to diagnose. Meehl repeatedly has called, instead, for the use of validated and reliable test instruments and other empirical means, as well as experimentation when novel diagnoses are required, as antecedents to the formulation of conclusions regarding the psychological state of human beings.

derived under highly controlled and rigorous circumstances. When a psychologist is asked to testify in the courtroom regarding the circumstances that surrounded behavior that has already occurred, he must (a) gather information from every available source, (b) assign a numerical weight value as to the authenticity of his information, (c) determine if there are laboratory-derived principles which have applicability in this particular instance and, finally, (d) arrive at a conclusion as to what really did happen. Since, as mentioned, there is no way to validate his conclusions, the psychologist must proceed in his post-dictive diagnoses with great care. The degree to which the expert can avoid speculation regarding the operation of hypothetical or questionable motivations and cognitions on the part of those involved, and can reconstruct the situation in terms of the actual incidents that were present is the degree to which he can test his conclusions.

To illustrate this point consider the following case. Two advanced law students came to one of the authors and requested assistance on behalf of their client who was the defendant in a mock murder case. The circumstances surrounding the alleged murder involved a shooting which occurred while two women, a mother and daughter, were entering their home from the front porch. A man drove up to a nearby curb and shot the daughter. The distance from the car to the daughter was approximately 50 feet, it was a dark night, and it was raining. The key witness for the prosecution was the mother who identified the assailant as the estranged husband of her daughter.

It was the contention of the two law students that their most effective strategy would be to impugn the motives of the mother on the grounds of her obvious allegiance to her daughter and her animosity toward the estranged husband. They felt that it might be possible to show that these hypothetical motivations of the mother influenced, in some unspecified manner her perception in such a manner as to distort her testimony in a direction unfavorable to their client.

While admirable in their attempts to assist their client, the particular strategy they chose was ill advised. In the first place, they would have had to establish that the mother indeed harbored harsh feelings toward her former son-in-law. More important, however, they would have had to provide a mechanism by which these presumed cognitions or "mind" events might influence both what she saw and her verbal report of what she saw. As discussed above, the constructs they chose avowedly were mentalistic and, hence, hypothetical and unobservable.⁷⁹

Even more important was whether there was data congruent with their expectations. Presumably, if they were to make a strong case, they would have to rely upon a large body of solid literature which indicated that motives could influence what one saw and what one reported. It just so happened that there was a large body of evidence regarding this very issue. This evidence was obtained in the late Forties and early Fifties and, because, of its general emphasis

⁷⁹ Marshall, *The Evidence*, 2 *PSYCHOLOGY TODAY* 48-52 (Feb., 1969) similarly has addressed himself to this issue by calling to our attention the fact that there now are ample data from experimental psychology to provide either refutation or support for the testimony of a witness without recourse to an analysis of the contents of the "mind" of that witness.

on motives and perception, was coined the "new look" in perceptual research. Although voluminous, this data was, unfortunately, highly contradictory and, in general, suggested an erratic influence, at best, of motivation on perceptual behavior.

Fortunately, there was a much better way to approach their problem. This particular way avoided the use of mentalistic and/or hypothetical constructs, and relied more exclusively upon observable stimulus variables that undoubtedly were operative in the environment where the murder transpired. By simply rephrasing their question,⁸⁰ it was possible to invoke a large amount of much more consistent evidence which had a direct bearing on the facts of the case. The rephrased question was "what factors were present in the environment at the time the murder took place which could have served to obscure *accurate identification* of the alleged murderer?"

There is a large body of data regarding accurate detection of stimulus objects under various environmental conditions.⁸¹ First, it is well known that accurate identification of complex stimulus objects, such as the face of a human being, is exceedingly difficult under darkened circumstances. Second, distance also plays an important factor. Assuming that the witness's vision was normal, a more specific question was "what was the probability of accurate identification of a complex stimulus object at a distance of fifty feet?" Last, and also germane to the basic question formulated above, is how the presence of precipitation contributed to decreased visibility.⁸²

With these factors clearly in mind, it was possible to pursue one or both of two alternatives. The most simple alternative was to conduct a thorough literature search to determine and document the effects of distance, darkness, and precipitation on stimulus detection and then, based on the circumstances presented in court, abstract from this data the most relevant ingredients. As a second and more elaborate solution, one might simply solicit the cooperation of the witness to participate in a stimulus detection experiment in which conditions could be simulated to approximate those present at the time of the alleged murder. The accuracy of the witness's ability to identify complex figures under circumstances similar to those occurring when the murder took place could

80 Of interest is the contention of some that the contributions of science largely have been the result of more careful use of language. Since all of science rests on observation, it follows that any question which is posed in such a way that it cannot be answered through observation is not meaningful in the view of the scientist. Thus, one of the outcomes of the scientific method has been a revelation of sorts concerning how to "reformulate" unanswerable questions. Such "reformulations" make understandable the contention of the scientist that many of the questions that have plagued mankind have been perplexing, not because of their complex and seemingly insolvable nature, but because the question itself is phrased in such a way so as to appear meaningless. Often, it has been possible to simply rephrase many of the questions, and thereby bring about a ready answer.

81 J. MARSHALL, *supra* note 65.

82 Virtually any good textbook dealing with stimulus factors and perception can provide ample data relating to these issues. The reader is referred, by way of illustration, to such elementary treatises as H. LEIBOWITZ, *VISUAL PERCEPTION* (1965); R. DAY, *HUMAN PERCEPTION* (1969); and to a more intermediately advanced treatment by J. GIBSON, *THE SENSES CONSIDERED AS PERCEPTUAL SYSTEMS* (1966). More advanced treatments are contained in J. KLING & L. RIGGS, *WOODWORTH & SCHLOSBERG'S EXPERIMENTAL PSYCHOLOGY* (1971); R. HABER, *CONTEMPORARY RESEARCH AND THEORY IN VISUAL PERCEPTION* (1968).

then be indicated by some probability value, and could be used either to support or to cast doubt on her testimony.

The most important feature of this analysis is that by first properly formulating the question, it then becomes a relatively easy matter to draw upon solid laboratory evidence either to buttress one's conclusions or to generate a research program which can examine the facts presented in the court situation. Granted, it is never possible to exactly duplicate circumstances. In this sense, as has already been well put by James,⁸³ no two experiences, situations, or states of consciousness are ever the same. Nevertheless, by objectifying the circumstances as much as possible and by incorporating the more important variables thought to be operative at the time the event in question occurred, one can maximize the chances of an accurate postdiction.

In contrast to the aforementioned example, there are times when attempts at postdicting are clearly inappropriate. One of the most recent inroads made by psychology relative to the law is with respect to post-mortem examinations of the intentions of the deceased regarding dispersal of his accumulated wealth. In instances where there is suicide or where the mental competency of the deceased is in question, psychologists and psychiatrists have been called upon to attempt an analysis of the intentions of the deceased.

This practice quickly can be dispensed with as both erroneous and unfortunate. First, because the behavior of the diagnosed is never directly available to observation and scrutiny. Moreover, because there is simply no way to evaluate or assess the accuracy of the post-mortem diagnosis, thus eliminating any guidelines or checks on the psychologist or psychiatrist whose diagnostic inclinations may tend toward the elaborate. In essence, such a situation provides all of the ingredients necessary for projection of the psychologist's or the psychiatrist's own intentions, and contains none of the checks and balances requisite in the stated methodology of the behavioral scientist. It neither should be condoned by the reputable scientist nor should it be practiced under any circumstance. There is little way at this time for it to meet the rigorous standards established for psychology as a scientific discipline.

2. ACCURACY OF STATEMENTS MADE BY THE PSYCHIATRIST WHEN PREDICTION IS INVOLVED

Before directly taking up the question of accuracy of prediction, it is noteworthy that the courts take a very special view of mental illness. To illustrate this, consider a situation in which severe physical illness was involved and contrast the approach taken by society with a situation involving an emotional disorder. Justice Robert A. Jackson, at age 62, suffered a severe heart attack while serving on the Supreme Court. It later was recalled in his memorial tribute that the Justice's doctors had indicated to him that he had a choice between years of comparative inactivity or a substantial increase in the risk of death with continuation of his normal activity. Justice Jackson routinely chose the second

⁸³ W. JAMES, *THE PRINCIPLES OF PSYCHOLOGY* (1890).

alternative in his daily activity and shortly thereafter suffered his fatal heart attack. No court interfered with the Justice's decision.⁸⁴

Contrast this with a similar case in which court interference was imminent. Mrs. Laich, also 62 years old, suffered from arterial sclerosis which produced periods of relative irrationality. One day she was discovered in downtown Washington behaving in a confused fashion, but bothering no one. She was committed to a mental hospital. In petitioning for her release, she testified, during a period of rationality, that she was aware of her problem and knew that her irrational periods of confusion endangered her health, even her life. However, because of the discomfort she experienced in the mental hospitals, she preferred to assume the risk of living, and perhaps dying, in the normal environment. Her petition was denied and, despite continued litigation, she remained involuntarily confined in a closed ward of the mental hospital.⁸⁵

Why are the courts more concerned about mental than about physical illness? Why would Justice Jackson be left alone by the court but Mrs. Laich treated so differently when the consequences of both diseases were essentially identical. Apparently, the similarities between these two cases are obscured by the conceptual model⁸⁶ imposed on Mrs. Laich's case, but not on the other. Most courts would distinguish between the cases by simply stating that Mrs. Laich was mentally ill while Justice Jackson was not. But what is it about "mental illness" that makes a case functionally different from others? The explanation relates back to earlier statements regarding the potential for unimpeded use of free agency by the person who suffers from mental illness. Typically, mental illness is viewed as an agent which impairs the rational processes (which is inferred from aberrant behavior), reduces personal responsibility, and thereby renders the views, opinions, and personal decisions of the subject as less than totally valid. This is presumed not to be the case for a coronary patient.

Those who are unfortunate enough to suffer from mental illness must suffer the consequences of being viewed as incompetent to formulate their own destiny. Someone who possesses free agency must, therefore, be chosen to make decisions for them. One of the first in a long line of such people is the court psychiatrist who testifies in their civil commitment process, and who is called upon to decide whether preventive incarceration is necessary. This process raises an important issue. How likely should the predicted event have to be to justify preventive incarceration? For example, if it were agreed that preventing assault toward one's self would justify institutionalization, an important question is also how likely should it have to be that the person would assault himself before incarceration is justified.

Before further elaborating the problems that confront the court psychiatrist who is required to make predictions about behavior, the question arises as to how good the predictions by these experts are. A distinction should be made here between actuarial and clinical prediction. Clinical prediction is largely subjective and relies upon the experience of the practitioner and his anecdotal

84 See Dershowitz, *supra* note 76.

85 *Id.*

86 THARP & WETZEL, *supra* note 58, nicely contrast the medical versus the behavioral model in understanding non-organic emotional disorders.

observations of possible relationships between the symptomatology of his patients and their future behavior. Clinical prediction, therefore, is a generalization from uncontrolled, informal and largely subjective information. In contrast, actuarial prediction is prediction based exclusively on objectively derived information. A good example of this might be a prediction of a patient's behavior based on (a) his score on a test or a battery of tests and, (b) an empirically derived correlation or statement of relationship between this score and other behaviors (hopefully the behaviors in question). In the case of the actuarial approach, all that is necessary for prediction is the test score or scores of the subject. Numerous studies have been conducted regarding the efficacy of both procedures.⁸⁷ In general, these studies indicate that clinical prediction is, unfortunately, highly inaccurate, often being less reliable than predictions made by laymen. On the other hand, actuarial prediction can sometimes be substantially better. While not nearly perfect, it is not unusual for those skilled in the methods of actuarial prediction to be correct anywhere from 25% to 80% of the time depending upon behaviors under consideration.

Coming back to the role of the expert witness in the courtroom, it should be noted that virtually all prediction in such instances is clinical in nature. The lack of availability of tests designed to assess criminal and mentally disordered subjects, and the even greater paucity of information relating the symptoms of these persons to the probability of reoccurrence of the deviant activity mean that the court psychiatrist is left almost entirely to his own clinical acumen. Nevertheless, it is not unusual for this "expert" witness to confidently render decisions regarding the likelihood of future criminal or mentally disoriented reactions in particular cases as if he were operating on information obtained from an extensive pool of research.

With this dismal picture in mind, one might specifically ask in this particular case, just how expert are the expert witnesses in making the sorts of predictions which influence decisions concerning the possible institutionalization of a person. It should be noted that heavy, if not indeed exclusive, reliance is placed on such predictions by the law. Because of this, one would expect that there would be numerous follow-up studies regarding the accuracy of prediction. In spite of the fact that many hundreds of articles, monographs and books have been written, there seem to be fewer than a dozen studies which have followed up psychiatric predictions of anti-social conduct. Not so surprising, though, is that these few studies indicate that psychiatrists are rather inaccurate predictors—inaccurate in an absolute sense and even less accurate when compared with other professionals such as psychologists, social workers, correctional officials, and when compared to actuarial devices such as prediction or experience tables.⁸⁸ Moreover, these studies suggest that the psychiatrist is particularly prone to the error of overprediction. He tends to predict anti-social conduct where, in many cases, it would not occur. For every correct psychiatric prediction of violence, there are numerous erroneous predictions. Thus, among every group of inmates

⁸⁷ See the writings of Meehl, *supra* note 78.

⁸⁸ See the entire issue, 2 *PSYCHOLOGY TODAY*, February, 1969. See also Jeffery, *The Psychologist as an Expert Witness on the Issue of Insanity*, 19 *AMERICAN PSYCHOLOGIST* 838-43 (1964).

presently confined with psychiatric diagnoses of violence, there are only a few who would actually be violent in contrast to the many more who would not engage in such conduct if released.

Probably the major reason the psychiatrist does not learn from his erroneous predictions is that many of those he diagnoses are eventually incarcerated, thus giving him little opportunity to prove or disprove his prediction. However, he always learns about his erroneous predictions of non-violence, usually from newspaper headlines announcing the crime. Consequently, higher visibility of erroneous prediction is conducive to overprediction of violent behavior.⁸⁹

A major conclusion from this data is that we presently have an accepted legal policy, never approved by an authorized decision maker, which permits significant overprediction. It in effect condones the rule suggesting that it is better to confine several men who would not assault than to let free one man who would. The present system equates undefined danger with all sorts of minor social disruptions. It equates harm to one's self with harm to others, not recognizing the debatable nature of this decision. Dershowitz⁹⁰ has argued that the lesson of this experience is that no legal rule should ever be phrased in medical terms; no legal decision should ever be turned over to the psychiatrist; that there is no such thing as a legal problem which cannot and should not be phrased in terms familiar to lawyers. Essentially, Professor Dershowitz argues that civil commitment of the mentally ill is a legal problem in which lawyers should be quick to immerse themselves.

The basic thesis of the present paper is not entirely congruent with the conclusions of Dershowitz. Instead, while admitting that there are legal aspects to the problem, it is also a problem which requires research involving the highly controlled methodology of the behavioral scientist. While the issues of freedom, policy making with regard to potential threat to others or to one's self, and the like may well be within the realm of legal debate, the prediction of behavior is not. It is incumbent upon the judicial system to recognize that there are indeed available techniques which can substantially increase predictive accuracy.

E. The Psychologist as an Agent of the Court

In summary, we see the psychologist making his greatest contribution to the court in the capacity of a consultant and as a researcher. By applying the refined techniques and methodologies developed over the past decade, he can substantially increase our knowledge about both the etiology and the rehabilitation of deviant behavior. He can provide information through research so that the court can more efficiently tailor the sentence to the crime; that is, so the

⁸⁹ Interestingly, this selective "feedback" of information regarding the accuracy of psychiatric predictions illustrates reinforcement theory in action. By exposure to the aversive headline, the psychiatrist most likely will attempt to escape the possibility of such a future event by engaging in the response of even greater overcommitment. Stripped of its complexities, this action represents simple escape behavior from a noxious or threatening event. Moreover, if, through overcommitment, the psychiatrist can substantially cut down a future occurrence of unfavorable headlines, his behavior will be perpetuated, thereby entrapping him in a "vicious" circle, the major penalty of which has to be borne by the unsuspecting defendants he evaluates.

⁹⁰ *Supra* note 76.

sentence which is imposed will most adequately protect society and promote the rapid and efficient rehabilitation of the offender.

As a consultant, psychologists can advise both the court and the attorney regarding the behavioral data pertaining to perceptual, motivational, and learning variables that may be operative in the behavior of the defendant, witness, or other involved parties. He can provide information from the laboratory and from other settings involving research which most closely approximates or fits the details of the particular case at hand. Moreover, he can, in an advisory capacity, arrange for a situation which can test the validity of his generalizations. As in the illustration given regarding the murder case, it is often possible to evaluate the accuracy of statements made on the stand with simple perceptual or other kinds of tests. Such information can be invaluable in illuminating a point, providing important information for the jury, and amplifying the details which eventually can constitute part of the judge's decision.

Essentially, then, the psychologist can be of invaluable aid to the court as long as he always maintains his role as a behavioral scientist. The degree to which his statements rest on actuarial prediction is founded on reliable, consistent and highly generalizable data, or is generated by *in vivo* research in the degree to which his contribution will be less assailable and hence more accurate. The psychologist views behavior as determined, and as long as he adopts methodologies consistent with this view, he can substantially assist in uncovering details relevant to the behavior under consideration by the court.