A Behavioral Analysis of Legal Intent

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A Behavioral Analysis of Legal Intent†

Ira P. Robbins* and Harvey J. Sepler**

"The intent in mind covers the thing in full; the act covers it only in part."

Merrit v. Commonwealth
164 Va. 653, 657 (1935)

I. Introduction

The arrangement of contingencies to control individual behavior for the good of society is fundamental to the legal system.¹ Although all statutes and laws address these contingencies,² few formalized contingency analyses of legal procedures and concepts have emerged. Because legal concepts have traditionally been defined in cognitive terms, they are "often inherently vague in their definitional and evidentiary aspects."³ This inexactitude of established definitions of certain legal terms may be due to the subjectivity of the issues associated with the terms.⁴ Although a system built on subjective foundations relies on an adversary process to balance opposing views,⁵ the weaknesses inherent in the adversary process

In this article, the authors, though recognizing that the feminine gender is equally appropriate, use the masculine gender for personal pronouns. This convention is adopted for the purposes of style and consistency.

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1. See B. F. Skinner, Science and Human Behavior 430 (1953). Societies delegate the power to control individual and group behavior to an internal agency that is responsible for maintaining certain cultural practices. In our culture, that agency is the legal system.

2. See Dudley v. Victor Lynn Lines, Inc., 48 N.J. Super. 457, 138 A.2d 53 (1958). When one is held liable for damages resulting from his noncompliance with a promise to perform an act, the law is prescribing the delivery of punishment contingent upon an act (promise) avoidable by another act (adherence).


4. Id. at 175.

5. See Bazelon, Psychiatrist and the Adversary Process, Scientific American, June, 1974, at 49.
and the gravity of the consequences flowing from legal decisions warrant a continuing effort to achieve increased precision in the definition of legal terms. Reevaluation of traditional legal notions from a behavioral perspective offers a means of attempting such precision. The potential impact of behavioral analysis on the structure and operation of legal scholarship has been explored only recently. For example, analysis of contingencies affecting the number of insanity pleas has resulted in the raising of the "contingency consciousness" of many legal professionals. However, the benefits of applying a behavioral approach to other legal concepts have yet to be examined.

One concept ripe for behavioral analysis is "mens rea," or the guilty mind. Throughout its long history, numerous modifications of this basic concept have been proposed to make it a more useful analytical tool for resolving the complex issues with which it is associated. The contingency (behavioral) analysis that has proven successful in other areas of legal scholarship could help to clarify the dispute over the meaning of terms such as mens rea. This article explores the behavioral aspects of the concept of "guilty mind," and the relationship of this behavioral concept to the legal concept of intent.


8. Wexler, supra note 3.


II. The Theory of Intent

The importance of the concept of intent in the legal system has been well documented. According to Anglo-American common law, behavior must have two components in order to be regarded as criminal: actus reus (guilty or unlawful act) and mens rea (guilty mind). Liability for many crimes depends not only upon the fact that persons have performed external acts, but also upon the fact that they have done so with a certain state of mind, or will. Because intent is essential to determining state of mind or will, an understanding of the nature and etiology of the concept of intent is essential to an understanding of the criminal law.

The history of the concept of intent reveals both religious and philosophical influences. According to the philosophical doctrine of free will, for example, we are regarded as "responsible creatures," born with the capacity to choose between right and wrong, educated in the morals of our society, and, therefore, accountable for our actions. The exercise of man's "free will" is carried out through his behavior. To the extent that a behavior can be attributed to the individual, as opposed to external conditions, the behavior is described as intentional. One implication of this proposition is that behavior that conflicts with current social standards and that is potentially hazardous to an orderly society, such as criminal behavior, is viewed as intentional—that is, under the direct control of the actor—unless there is direct evidence to the contrary. Religious tenets, such as the Talmudic teachings on personal responsibility, also have helped to establish models for social control based on the concept of punishment for inappropriate behavior. Thus, responsibility has become correlative to punishability.

A simple pictorial representation of the relationship between

13. See Bazelon, supra note 5, at 2.
15. The Babylonian Talmud, Sabbath § 29b (Sedar Mo'ed., Vol. I, 131: printed by the Soncino Press, London 1938) ("Mishnah. If one extinguishes the lamp because he is afraid of gentiles, robbers, or an evil spirit, or for the sake of an invalid, that he should sleep, he is not culpable. If because he would spare the lamp, the oil, or the wick, he is culpable."). Cf. Robbins, Book Review (Learning by Redoing), 77 Colum. L. Rev. 153 (1977).
personal responsibility and the degree of socially-administered punishment for undesirable behavior can be made by constructing two parallel continua.

RESPONSIBILITY

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PUNISHMENT

---

The top line represents degrees of personal responsibility for a given behavior. It directly depicts the amount of control individuals theoretically exert over the particular behavior they exhibit. The greater the "personal control" as evidenced by a further point on the responsibility continuum, the more the behavior is said to be "free." The determination of legal intent begins at the point where individuals are "knowingly and voluntarily" in control of their behavior. When behavioral control is attributed to external sources, as in cases of duress and provocation, a lesser point along the continuum is assigned.

The determination of responsibility is a relevant, but not exclusive, legal concern. The law also must measure its right of intervention by the effects of an action. It is not difficult to speculate on the dangers inherent in allowing a government to punish individuals on the basis of an inferred intent. Therefore, the degree of legal accountability that individuals assume must be related to the amount of harm they inflict.

By considering a third continuum representing varying degrees of inflicted harm, and by balancing the quantum of harm with the indicated degree of intentionality, the appropriate amount of punishment can be imposed. Furthermore, if numerical values indicating degree of control over behavior are placed below predetermined points on all continua, a metaphorical analogy to the interactions of guilt and responsibility, and thus a determination of punishment, can be made. Since the source of control over a certain behavior is credited to the individual, placement along the responsibility continuum changes as the numerical value increases. This is true until

16. See Table One.
a point is reached at which a determination of personal control is no longer necessary—in other words, where strict liability is in effect.

Because each crime has distinct dimensions of form and effect, different continua must be drawn. For the purpose of example, however, the classifications of bodily injury are placed along the harm continuum such that simple assault and homicide occupy the extremes of the continuum. Arbitrary numerical values are assigned to each category to facilitate calculation. Several degrees of punishment are interspersed along that continuum to represent the two most severe forms of criminal punishment: incarceration and execution. By totaling the values of selected points along the responsibility and harm continua, and dividing by two, it is possible to estimate the nature and quantum of punishment appropriate for a given crime.

Judge Learned Hand developed an analogous construct for determining liability for negligence. Under his formula, liability was imposed if the quantified burden of providing adequate precautions was less than the product of a factor representing the probability of occurrence multiplied by a factor representing the gravity of the potential resulting injury. Like the construct proposed above, the Hand formula is merely a representation that depicts the interaction of variables; clearly, it does not offer a means of making exact calculations of moral responsibility and punishment. Nevertheless, such formulae provide a method for analyzing the relationships among the harm resulting from an act (the primary measurement of legal accountability), the amount of personal responsibility attributed to the actor (in which determination of intention is the critical issue), and the punishment imposed. An understanding of

18. See United States v. Carroll Towing Co. 159 F. 2d 169 (2d Cir. 1947).
19. Id. at 173.
21. The fact that other legal researchers have independently arrived at a similar analysis lends support to this descriptive notion. Wilkins, et al., of the Criminal Justice Research Center, devised a set of sentencing guidelines based upon the computation of pertinent characteristics of both the crime and the criminal. These guidelines were devised after more than 400 criminal cases tried in Denver and
### TABLE ONE
**HORIZONTAL CONFIGURATION RESPONSIBILITY**

<table>
<thead>
<tr>
<th></th>
<th>Innocent Agent</th>
<th>Provocation</th>
<th>Mistake of fact</th>
<th>Duress</th>
<th>Mistake of law</th>
<th>Intoxication</th>
<th>Negligence</th>
<th>Recklessness</th>
<th>Premeditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
</tbody>
</table>

**HARM**

- Simple Assault
- Assault with Deadly Weapon
- Gross Bodily Harm
- Homicide

<table>
<thead>
<tr>
<th></th>
<th>Absolution</th>
<th>Imprisonment</th>
<th>Capital Punishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
these relationships is particularly valuable in light of the convention of administering punishment to match the severity of the crime, which, in turn, reflects the attitude that justice is a process of balancing, inter alia, harm, remuneration, and retribution.

In the administration of justice, the question of accountability for behavior is evident. Specifically, to what behavior does legal accountability attach, and why? By identifying the behavioral features of acts for which the actor is not held legally accountable, it is possible to understand better the behavioral features, or intent, required in an act for which the actor is held legally accountable. An individual is not legally accountable for his acts if at the time of doing what would otherwise be a punishable act, [the actor] was unconscious, mistaken about the physical consequences of his bodily movements or the nature or qualities of the thing or persons affected by them, or, in some cases, if he was subject to threats or other gross forms of coercion or was the victim of certain types of mental disease.

Vermont were studied. By placing the dozen critical variables on a sentencing grid and calculating the points of interaction, a preliminary model accurately predicted the prescribed sentences delivered by judges in 80% of the one-hundred cases sampled. See Wilkins, supra note 20, at 7.


23. While it may be argued that the principle of proportionality similarly addresses the other utilitarian purposes of punishment—deterrence, incapacitation, and rehabilitation—no distinction among the four functions is necessary here. See generally An Introduction to the Principles of Morals and Legislation, in 1 The Works of Jeremy Bentham (J. Bowring ed. 1962).

24. H. Hart, supra note 11, at 28. Several psychiatrists have proposed the adoption of a bifurcated court process, an extension of that currently in use in California courts. By such a process, juries would decide questions of fact only, while the judge or judicial panel would consider the criminal's mental state, or mens rea, in deriving the appropriate punishment.

Menninger, for example, has stated that issues of intent are irrelevant to questions of fact and, indeed, serve to hamper the efficient disposition of justice. Rather, they are functional questions in determining the judicial disposition of punishment after guilt has been assessed. K. Menninger, Personal Communication, (April 7, 1977). See also Louisell & Hazard, Insanity as a Defense: The Bifurcated Trial, 49 Cal. L. Rev. 805 (1961).
When an individual is said not to be legally accountable, behavior is controlled by an external force. In those instances, the individual does not have the capacity or opportunity to make alternative responses. While the source of the external force often is easy to identify in cases of coercion, it becomes more difficult in cases of provocation, duress, and insanity. However, if all behaviors are ultimately controlled by some environmental contingency, the issue of liability and excusability turns only on the availability of alternative responses in the face of compelling environmental demands. For example, assuming that a select stimulus occasions any number of potentially appropriate (reinforceable) responses, an individual’s “freedom” to act in one way, as compared with another, reflects the degree to which the environment fails to determine his behavior precisely. That is, by having alternative responses that will yield reinforcement, “degrees of freedom” are increased. When alternative responses are not available, and, therefore, there are fewer reinforceable behaviors, the tendency to behave in a particular manner is more stringently determined and, in a sense, coerced. This availability of alternative responses is critical to an analysis of intention, for there can be an intentional act, in behavioral terms, only when several forms of behavior are available in a situation that requires a response. The existence of alternatives as both a necessary and sufficient condition for the determination of legal intent was expressed by Justice Cardozo: “[T]here can be no intent unless there is choice, yet by the hypothesis, the choice without more is enough to justify the inference that the intent was deliber-

25. Due to the complexity of a thorough analysis of knowledge, its discussion here will be limited. See generally Robbins, supra note 6; Robbins, supra note 7; Robbins, supra note 15; H. Sepler, A Behavioral Analysis of Knowledge and Understanding (1975) (unpublished manuscript on file at the University of Kansas).

26. See B. F. Skinner, Contingencies of Reinforcement 7 (1972). The term “contingency” or “contingency of reinforcement” will be used herein to refer to the interrelationships among: (1) the occasion upon which a response occurs (the stimulating environment); (2) the response itself; and (3) the reinforcing consequences.

27. See G. Glass & J. Stanley, Statistical Methods in Education and Psychology 346 (1970). The term “degrees of freedom” here refers to the number of integers whose value may vary once certain other integers are determined. The more specific a stimulus configuration is, the fewer responses will be prompted in that particular instance. Similarly, when only a select set of responses can result in reinforcement, alternative responses are likely to be weakened or eliminated.

28. See Goldiamond I, supra note 7, at 23. See also Furlong v. German American Press Ass’n., 189 S.W. 385, 389 (Mo. 1916) (defining false imprisonment).

ate and premeditated."

Put differently, if statements of circumstantial intent from witnesses and parties in court are considered verbal behavior, can a court rely on them to determine the true intention of an accused individual? This question cannot be answered without initially examining the critical features that control the form of statements of intent and the legal tests employed to study them.

Knowledge of the controlling contingencies and the ability to identify sources of control are fundamental to understanding meaningful statements of intent, and can serve as well to help identify alternative, perhaps more reliable, indices of intent. Such knowledge is obtained either through direct exposure to the natural contingencies, or, as is more commonly the case with social behavior, by exposure to contingency-specifying rules, which state the relationship between a form of behavior and its consequences. When an individual states what he "intends" to do, functionally he is signalling to the listener that a particular response is likely to occur, and that he expects the listener to respond accordingly.

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32. See generally B. F. Skinner, *VERBAL BEHAVIOR* (1972). The conditioning of verbal behavior has been shown to be consistent with the rules of conditioning for nonverbal behavior. Identification and manipulation of controlling conditions (stimulus-response-consequence contingency) is necessary to an understanding of how behavior is learned and generalized.
33. See B. F. Skinner, supra note 32, at 166-71. For example, when a driver brings his automobile to a complete stop at an intersection guarded by a flashing red traffic light, elements of the three-term contingency may be observed. While the discrimination of the appropriate times to stop the automobile becomes more difficult to make without the appearance of a prior stimulus (red light), there is much research to suggest that the control exerted by the contingencies for reinforcement (i.e., delivery of the consequences for stopping, as opposed to not stopping) is the most critical element for determining the form and probability of a specific behavior.
34. See W. Day, supra note 7, at 1. Day suggests that statements of intent serve as indicators to the listener of the probability of a particular forthcoming response. For example, when a speaker announces that he "intends" to do X (e.g., leave home by 9 a.m.), he is indicating to his verbal audience that the probability of his doing X is strong.

The speaker may evaluate the probability of forthcoming responses in either of two ways. When certain stimulus conditions, which have previously evoked particular responses, are again presented, the speaker may report that those particular responses are especially likely to occur under these conditions. Such a statement of intent describes the stimulus control of the current conditions over his responding.
learn to state "intentions" or "purposes" either by responding to or describing certain environmental variables that previously have accompanied particular actions, or preparatory behavior that previously has resulted in a specific action. The acquisition of monetary rewards following another's death, or the quelling of abusive and provocative behavior are examples of existent reinforcement contingencies. Similarly, behavior based on its probable consequences is "intentional" behavior that is expected to achieve a particular result. In other cases, statements of intention are merely descriptions of reinforcement contingencies that resemble past conditions or contingencies. The effect on the listener may be to change his disposition to act toward the speaker. In this sense, statements of intent are functional, and are susceptible to ulterior contingencies that benefit the speaker in other ways.

By recognizing the conditions (contingencies) that control personal responses, and by extrapolating to similar controlling conditions, we sometimes are able to identify the conditions that generally control behavior. In this way, it is possible to state the probable intention of an individual. These estimated behavioral relations ("reasons") are collectively identified by the term "intention," and accurate predictions or estimates of intent are made possible by strong behavioral control and highly perceptible reinforcement contingencies. Yet the incidence of false statements of intent is high, and courts have traditionally been skeptical of the accuracy of verbal reports. This skepticism may be due to the difficulty of identifying controlling stimuli, the imprecision of attending to relevant sources of control amidst a multiplicity of alternative behavioral relations, and the inaccessibility of these private behavioral relations to the community.

Statements of intent also may describe the increased probability of occurrence of certain events in a behavioral chain (i.e., a sequence of behaviors). For example, given that the probability of completing later behaviors in the chain is increased when the former behaviors are executed, the likelihood of leaving by 9 a.m. (the final component) is high when the preparatory behaviors in the chain (e.g., awakening by 8 a.m.) are completed. Thus, a speaker may have a tendency to report an intention to perform a later behavior in a behavioral chain when certain preparatory responses are made.

36. See, H. Hart, supra note 11, at 3.
38. See B. F. Skinner, supra note 1, at 260.
Because identification of prior intention is a prerequisite to criminal liability, certain tests are applied by the courts to determine, to the greatest extent possible, the intention of the accused at the time of committing the crime, and whether the accused intended to perform a further act beyond the scope of the criminal act for which he was brought to trial.\textsuperscript{39} Two major standards used to determine mental state—the corroborative evidence and reasonable man tests\textsuperscript{40}—are based on the recognition of probable behavioral relations. Under the first standard, verbal reports are corroborated by the preponderance of supporting accumulated facts or evidence, a deductive process; the latter entails the construction of a logical behavioral sequence by reference to common behavioral tendencies, an inductive approach. The result of either test, however, is only as sound as the knowledge of the conditions that control behavior and the probability of their occurrence. But despite differences in approach, both formulations deal with the behavior of the "reasonable man". Accordingly, any determination of what the accused actually intended to do is based on what ordinarily prudent people would do under the same circumstances.\textsuperscript{41} The validity of both tests is founded on the presumption that the actor intends the natural consequences of his acts.\textsuperscript{42} What these natural consequences of an act are is a question for the trier-of-fact, which usually is a jury.

If the jury is concerned with probability of fact—that is, when a reasonable person should have foreseen the probable results of an act and, therefore, be held accountable for those results—then there is a danger of destroying the logical distinction between wanton negligence and simple negligence. To elaborate, defendants are found guilty of simple negligence if they are unable to foresee certain harmful consequences that a reasonable person would have foreseen. This is the reasonable man test. For a defendant to be found guilty of wanton negligence, proof of intentional conduct is required. Following the logic set out above, if the consequences of an act must be probable for a reasonable person to foresee them,

\textsuperscript{39} See Kadish, \textit{supra} note 9, at 88-95; H. Hart, \textit{supra} note 11, at 117.
\textsuperscript{40} See, J. Salmond, Salmond on Jurisprudence 416 (8th ed. 1930). See also Kadish, \textit{supra} note 9, at 312.
\textsuperscript{41} See generally O. Holmes, \textit{supra} note 12, at 3.
\textsuperscript{42} See G. Williams, Criminal Law: The General Part (1953). Williams has stated that "the expression 'natural' in law must mean probable; otherwise 'natural' would be meaningless." \textit{Id.} at 77.
failure to respond to probable consequences is either improbable or intentional. Thus, while behavior that is undertaken despite knowledge of foreseeable harmful consequences clearly constitutes intentional criminal conduct or recklessness, failure to respond to probable consequences that are sufficiently perceptible to a reasonable person, generally thought to constitute simple negligence, could also be based on intent. If this is the case, then any distinction between wanton negligence and simple negligence is suspect.

This argument can be answered in behavioral terms. Initially, the conduct of the accused at the time of committing the act is not the only evidence of his intention. Factors such as confessions, denials, demeanor in the witness box, and circumstantial evidence also may be considered. Moreover, a jury cannot conclusively state that the accused actually foresaw the consequences of his action, no matter how cognizable the probable consequences of the act are to a reasonable person. Circumstances such as intoxication, insanity, or infancy, for example, may negate such knowledge. In the latter two cases, modern law neither expects nor requires the incompetent to be knowledgeable of possible contingencies; thus it does not hold him accountable for the harm resulting from such action.

The major problem with the reasonable man test is that standards of reasonable conduct become more difficult to recognize as the number of deviations in behavior increases. To illustrate this point, four depictions of the normal curve are presented in Table Two.

TABLE TWO
Assume that a poll on a given issue was administered to a hypothetical sample of the population, and that the responses were charted on a distributional scale, or normal curve. The “reasonable man”

45. An example of the type of questions, format of answering, and suggested procedure for scoring appears in Appendix I. While the procedure is a useful de-
might yield those scores that fall within some standard deviation away from the highest point in the distribution (the place where the greatest number of scores fell). Suppose further that the questions on the poll provided any two elements of the behavioral paradigm—stimulus, response, and consequence—and required the interviewee to select the most appropriate third component from a list of alternatives. If the purpose of the test was to determine the most desirable consequence of a given behavior exhibited in the presence of a given stimulus, a reasonable person would respond within a certain range of deviations from the mode of the distribution—that is, away from the consequence most frequently chosen by the sample population. When the curves are normally distributed, determination of the most common response can easily be made. The more refined the delineation, the easier it becomes to determine whether a single behavior falls within the area designated "reasonable". (Of the normal curves shown in Table Two, "A" depicts the most narrow distribution of answers to the sample poll, and "D" represents the widest variation of answers.) If the purpose of the test was to determine the extent of negligence, a simple comparison of the consequence the accused thought would most probably result from a given behavior with the consequence the sample chose as the most probable would be sufficient. If the accused's choice was within the "reasonable" area, he would not be found negligent. A label of "recklessness" might be more appropriate, because intentional conduct would likely constitute the act, the results of which are to be reasonably expected. If, however, the choice made by the accused was outside the acceptable range, he would have been unaware of the consequence of which a reasonable person would have been aware.

When the bulk of the distribution of survey answers from a given population is weighted at the mode—as in curve "A"—the community allows for smaller deviations in behavior, and determinative tool, it must have a comparable measure of community standards regarding the acceptability range of perceived reactions to each situation in order to judge individual perceptions. The next step, then, would be to transform the questionnaire from a descriptive to an evaluative tool. See generally J. Piaget, The Moral Judgment of the Child (1932); Keaser & Sales, The Empirical Investigation of Young Children's Awareness and Usage of Intentionality in Criminal Situations, 1 Law and Human Behavior No. 1 (1977). Hypothetical situations, in which criminal fault and damage resulted, were presented to children of varied ages. The children were asked to assess the degree to which they thought damage was intentionally inflicted.
nations of the reasonable person are easily made. In these cases, specific consequences are almost certain to occur. If, however, the most frequent choices in the survey are widely distributed—as in curve “C”—the acceptable range allows for greater deviations in behavior. In these cases, negligence is not as easily proven. When the distribution is widely spread—as in curve “D”—there is no one consequence that is considered most likely to occur. Such cases of negligence may be brought before the courts more frequently, and subsequent judicial decision making is more difficult. The same difficulty in proving negligence exists when the behavior of the accused falls just outside the range for the reasonable man. Thus, the reasonable man test is useful only when the modes are easily distinguishable—as in curves “A” and “B”—and the deviations are well beyond the acceptable range from the mode.

Since reports of intention are actually statements of probability, one must confront the critical question of how probable the results of a behavior must be before an individual is to be held responsible for them. One plain answer is that the behavior must be beyond an acceptable range of deviations from the mode.46 Of

46. One theme weaving throughout the entire discussion in this article is that the means and methods of the social sciences can be useful to the law. See generally Robbins, supra note 7. Clearly, however, quantification by some social-statistical methodology is only one aspect of the question. The largest single part, for the legal system, is the determination of the meaning of the quantification. That is to say, a “fact” can never be “proven” scientifically. See, e.g., id. at 508-16. The best that we can do is to test, by inductive reasoning, the “null hypothesis,” in order to attempt to reduce the limits of error. See, e.g., Ethyl Corp. v. EPA, 541 F.2d 1, 28 n.58 (D.C. Cir. 1976); McGill v. United States, 348 F.2d 791 (D.C. Cir. 1965). A particularly good example of this point in another context concerns the “beyond a reasonable doubt” standard of the criminal law. Suppose that a woman’s body is found in a ditch in an urban area. There is evidence that the deceased had a violent quarrel with her boyfriend the night before. He is known to have struck her on other occasions. Investigators find the murder weapon, a knife which has on the handle a latent palm print similar to the defendant’s print. The information in the print is limited so that [a fingerprint] expert can say only that such prints appear in no more than one case in a thousand [in the general population]. Finkelstein & Fairley, A Bayesian Approach to Identification Evidence, 83 HARV. L. REV. 489, 496 (1970) [hereinafter cited as Bayesian Approach]. Compare People v. Collins, 68 Cal. 2d 319, 438 P.2d 33, 66 Cal. Rptr. 497 (1968). The problem now posed is whether the defendant is “guilty”. At the risk of gross oversimplification, assume that the combination of the evidence of the violent quarrel and the evidence that the defendant had struck the decedent on other occasions produces x% proba-
greater significance, however, is the fact that discriminations of probability in a community occur within smaller ranges of deviation from the mode—as in curve “A”. If the acceptable range contains nearly all of the scores on the distributional curve, a greater degree of precision is required of the citizens. It is crucial in this type of evaluation that the sample be representative of the population of which the accused is a member, for since the jury is presumably comprised of a group of one’s peers, it should constitute a representative sample. In fact, selection of jury members might be made according to responses to a questionnaire not unlike that in Appendix I.47 Such a procedure might eliminate selection by attorneys on the basis of superstition, which might be described as a form of judicial administrative psychology.

One further issue should be addressed, though it is of doubtful importance to a true understanding of the nature of intentional action. Several scholars recently have alluded to two distinct forms of intention, which presumably give rise to different legal consequences. The first kind of intention can be represented by an illustration. When one man kills another while driving at a high speed, the law inquires whether the driver knew of the foreseeable dangers that might result from his behavior, or, in other words, whether the probability that the defendant killed her. Further assume that the addition of the one-in-a-thousand evidence raises the probability to, say, 98.5%. The paramount question, for present purposes, then becomes whether that probability is “beyond a reasonable doubt,” or, to state it differently, whether reasonable doubt is greater than a 1.5% risk of error in the decision of the trier-of-fact.

This question—like that of the requisite intent for criminal culpability—is a legal, rather than a scientific, one. As such, “[w]e must deal with the terminology of law, not science.” Ethyl Corp. v. EPA, 541 F.2d 1, 28 n.58 (D.C. Cir. 1976). Great flexibility is inherent in such a system, allowing the fact-finder to assess risks, to measure probabilities, and to make highly subjective judgments. While the sciences may help us to clarify and refine the concepts with which the law deals, the ultimate determination, be it a fault or virtue of our system, is a legal one. Thus, although there certainly are potential dangers of quantification, there can be great advantages as well. Compare Bayesian Approach, supra this note and Finkelstein & Fairley, A Comment on “Trial by Mathematics”, 84 HARV. L. REV. 1801 (1971) with Tribe, Trial by Mathematics: Precision and Ritual in the Legal Process, 84 HARV. L. REV. 1329 (1971) and Tribe, A Further Critique of Mathematical Proof, 84 HARV. L. REV. 1810 (1971). See generally A. MOENSSENS, R. Moses & F. Inbau, SCIENTIFIC EVIDENCE IN CRIMINAL CASES (1973). Fundamentally, then, the question may be a serious one of attitude—on the one hand, optimism and the vision of a dynamic legal system, or, on the other hand, pessimism and the acceptance of a static one.

47. See note 45 supra.
driver acted intentionally. If the accused responds that he was aware of the foreseeable consequences but did not intend to harm anyone—for example, in the same way that one who fires a gun at point-blank range at a victim’s head intends to inflict harm—the law must determine whether “intentionally behaving” is equivalent to “behaving intentionally.” In so doing, one must attempt to distinguish between intention-as-behavioral-control and intention-as-goal-directed-behavior. In the first case, the courts query whether the accused was in control of his behavior and aware of its foreseeable consequences; in the second, they rely heavily on the probability that a reasonable man would order his behavior to achieve a desired end. Although the distinction succeeds in calling attention to various aspects of behavioral control, it is of limited analytical utility for present purposes.

While academic disputes continue over how the law should react to varied degrees of awareness and control of behavior, the courts have developed a useful test for the classification of intentional crimes. Since choice among alternatives is necessary for deliberate action, intentional behavior requires preexisting reflection or preconceived design, sometimes described as forethought. This time component, for example, is critical to a finding of first degree murder. In addition, it suggests that variables external to the accused may be reliable indicators of behavioral control.

The Supreme Court of California has devised a tripartite test to evaluate behavioral episodes termed the “Premeditation and Deliberation Formula.” The components of this test are: (1) planning (the conduct of a party prior to the commission of an illegal act that shows that the party was engaged in activity directed toward, and intended to result in, the act); (2) motive (facts about the defendant’s prior relationship with the victim from which the jury can infer a motive) and, (3) manner of commission of act (facts from which the jury can infer that defendant acted according to a preconceived design). Inasmuch as the element of time theoretically is

48. See H. Hart, supra note 11, at 117.

49. Bentham has called these concepts “oblique” and “direct” intention, respectively. J. BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 200-08 (1948) (1st ed. London 1823).


related to the possibility of choice, the activities of the accused prior to the commission of the illegal act might indicate the extent to which he chose to behave as he did. These preliminary movements may be viewed as elements of planning, with degrees of criminal liability corresponding to the extent of planning activities over time. Planning activities illustrative of the first component include prior possession of the murder weapon, furtive pursuit, and careful concealment of the victim prior to actually committing the illegal act, in order to prevent interference. Behaviorally speaking, such planning steps may constitute early components of a behavioral chain, in which later components, such as the actual commission of the crime, are made more probable by response to discriminative stimuli in the behavioral chain. This relationship is seen more readily when the commission of a crime results from an extended planning effort. Hence, the difficulty of extricating oneself from a complicated criminal plot may be one reason why the existence of extended planning activity is viewed by the courts as indicative of higher criminal culpability.

 Apparently, courts are requiring less planning, over a shorter period of time, before finding the first component of the premeditation formula. In several cases, careful preparation immediately prior to commission of the act has been held to be sufficient for a finding of first-degree murder. However, first-degree convictions are returned with much less difficulty when a period of cool reflection weakens a defendant's claim of provocation. When planning over time is not established, the courts must rely more heavily on the other two components of the formula to affirm a finding of inten-

52. Behavior occurs linearly in time, so that as more time is observed, more behavior is inferred, and vice versa.
53. See Belton v. United States, 382 F.2d 150 (D.C. Cir. 1967).
56. See Commonwealth v. Carrol, 412 Pa. 525, 194 A.2d 911 (1963). In this case, the testimony of several psychiatrists was a primary element in the defense. The testimony of these expert witnesses was that if the gun had fallen to the floor as the defendant reached for it on the windowsill, he would not have had the homicidal capacity to pick it up and consummate the murder. Id. at 530, 194 A.2d at 916.
tional homicide.  

Facts about the defendant's prior relationship with the victim, from which potential reinforcement contingencies can be perceived by the jury, are collectively described as motive, the second component of the premeditation formula. Although it is said that the relationship between defendant and deceased is an important element in arriving at inferential intention, it is in actuality the contingencies that are associated with that relationship that are critical. For example, when one spouse murders the other in order to alleviate the emotional stress resulting from continued arguments, the desire to escape from an aversive contingency positively reinforces the homicidal behavior. Similarly, when an individual murders a person in order to receive insurance benefits, the effects of a positive reinforcement contingency will likely establish "motive" or "incentive" which, when combined with one of the other two components, may be sufficient to allow a jury to infer purposive behavior. Thus, motive is defined by the reinforcement contingencies that may have controlled the behavior.

The third component of the premeditation and deliberation formula relates to the manner of execution of the criminal act—specifically whether the act was performed in such a precise way as to indicate a preconceived design and, therefore, intentional behavior. If a lethal knife wound is in a vital part of the body rather than at random points, for example, a jury is likely to conclude that the homicide was characterized by deliberate intention. Typically, first-degree murder convictions entail a combination of at least two of the components discussed above, whereas lesser homicide convictions may be decided by only one component.

While this formula accounts for the three elements of a behavioral relation—stimulus (planning activity as part of a behavioral chain or sudden provocation), response (manner of killing), and consequence (motive or reinforcing event contingent upon the said activity)—its validity is still subject to the weaknesses inherent in the reasonable man test. For example, how much and what kind of behavior is sufficient for the trier-of-fact to conclude that a reasonable man would be planning an event? Similarly, how much

60. See Goldiamond II, supra note 7, at 8.
provocation should a reasonable man be expected to endure, and for how long, before he reacts to it? Would a reasonable man be able to execute a crime so precisely if he had not intended to perform it? Nevertheless, a standard for behavioral control that is based on an examination of all three elements of the paradigm is a promising evaluative device, and its perfection offers a stimulating challenge.

III. Implications

As has been suggested, the major problem with the current interpretation of legal intent is the general confusion within the legal community regarding the nature and scope of the concept. This confusion can be ascribed to its fundamental subjectivity and to the courts’ resultant discretionary approach to the issues involved. The by-products of this subjectivity may, in fact, limit the consistency and efficacy of the judicial process. To formulate perimeters for this nonuniformity, practical analyses that can furnish the means for innovative applications of the concept of intent are required.

Sentencing guidelines provide an excellent example of how objectifying a traditionally discretionary procedure may enhance the over-all consistency of adjudications. The principal contributions of the guidelines are the identification of critical features of the offense or offender, the weighing of them on a two-dimensional scale, and the prediction of the appropriate sentences from numerical calculations. In other words, discretionary sentencing can be made an objectifiable and predictable procedure, with the added benefit of a reduction in court delay and backlog.

Legal intent can be analyzed in comparable pragmatic terms. Perhaps by clarifying essential elements of the concept, moral and procedural difficulties can be ameliorated, resulting in greater consistency and efficiency in legal adjudications. This article has laid the foundation for such a practical approach to the concept of intent. It has identified significant behavioral components inherent in the concept, and suggested, by example, a potential measurement procedure to effectively predict and determine legal liability flowing from given behaviors. The next stage in integrating these processes

63. H. Hart, supra note 11, at 22 (justice is characterized by the expediency and consistency of individual behavior for the mutual good of the individual and the society). See Robbins, supra note 6.

64. See notes 20 & 21 supra and accompanying texts.
is the derivation of empirical valuations for each component leading to structured determinations of accountability.

IV. Conclusion

Since the issue of legal intent involves a series of continua, rather than dichotomies, it may be inappropriate to ask whether a person behaved intentionally or unintentionally. Rather, the relevant inquiry might focus on the degree to which the actor was (1) aware of his behavior (whether the actor would be able to state or otherwise communicate what he is doing); (2) knowledgeable of the consequences (whether a reasonable person would be able to estimate the probable outcome of a given behavior on a continuum of normal curves for each crime and for the possible behavioral relations); and (3) in control of his or her behavior (whether there were alternative reinforceable behaviors readily available). These are the questions of legal intent, and the fact that triers-of-fact are compelled to make discriminations among behaviors on the basis of subjective, intuitive notions detracts from the consistency and, perhaps, the integrity of the judicial system.65

Although there is no reliable method of calculating and interpreting behaviors currently available, the variables that are necessary for a determination of intent can be identified. The popularity of sentencing guidelines,66 for example, suggests that it is possible to respond more consistently and perhaps more judiciously to traditionally unquantified variables. It is important to recognize that such analyses are within reach, and can be the bases of an innovative approach to the concept of intent.

In order for the judicial process to analyze, evaluate, and predict man's behavior adequately, all three elements of the behavioral paradigm—stimulus, response, and consequence—must be taken into account. Indeed, the proper administration of justice cannot be effected by a consideration of anything less. To this extent, a more complete perspective of legal intent involves behavioral analysis, and the future of the judicial system may depend, in large part, on the general acceptance of this proposition.

65. Interestingly, it is logical that an analysis could be made to determine the historical and environmental variables that control a judge's or juror's disposition to react to a particular set of facts. See note 46 supra. See generally Robbins, supra note 7.

66. See notes 20 & 64 supra and accompanying texts.
APPENDIX I
SAMPLE POLL ESTIMATING THE RANGE OF THE REASONABLE PERSON

KEY: 10 - 20 = never
     21 - 40 = sometimes
     41 - 60 = likely
     61 - 80 = always

DIRECTIONS: Answer the following questions by choosing how probable it is that a particular result will occur. Specifically, write in the space provided a number which corresponds with a degree of likelihood listed in the key.

1. Given that the rate of traffic accidents reported in residential suburban areas is highest when at least one of the automobiles is traveling at a speed over 50 mph (defined as "high" residential speed), what is the probability that a car, driven at a high speed in a residential area, will meet with an accident?
   Answer: 

2. Given that someone is lawfully fleeing from an assailant, who he believes will harm him, and that the best available means of eluding his pursurer is to drive faster than the pursuer through streets closest to the driver (in this case, within a residential area), what is the probability that the driver will travel at a high speed in a residential area?
   Answer: 

3. Given the following circumstances:
   a) Man, who had attained a high rank in the army, forced to resign by demands of wife
   b) Wife, who had been diagnosed as mentally ill, continually beat and otherwise harmed their children
   c) Wife argued violently about temporary employment assignment to another city
   d) Psychiatrists later diagnosed husband as suffering from extreme mental and emotional imbalance, which was accentuated by a long violent argument with wife, to the point of acting impulsively and in desperation.
   What is the probability that the husband would engage in behavior that would extricate himself from his wife?
   Answer: 

4. Given that the wife, in the above question, would not concede to divorce what is the likelihood that the husband would act violently towards her, most especially during the course of a heated argument?

Answer: ____________

(Interestingly, the facts in questions 3 and 4 above are taken from Commonwealth v. Carrol, Supreme Court of Pennsylvania, 1963. In this case, the husband accused of murdering his wife, pleaded that, due to provocation, he could not be liable for premeditated murder.)

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Scoring

By first drawing an abscissa with points associated with the available range of choices (such that a distributional scale is constructed), plot answers by all subjects on a scale for every question. For example, all scores for question 2 may be plotted on a scale resembling the one below:

| 10 | 20 | 40 | 60 | 80 |

After placing scores above their designated values, a curve will be formed, from which standard deviations may be calculated. Once this is done, and after designations are made regarding the number of deviations the public will allow, the "reasonable" area for each question is comprised of only those scores which fall within the designated deviation. Thus, a range of acceptable or "reasonable" scores is objectively depicted, as well as a useful means for evaluating potential juror's and the accused's responses.