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On the Predictability of Violent Behavior: Considerations and Guidelines

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ABSTRACT: Following a semantic discussion of dangerousness, and having established its dynamic concept, the authors define the prediction of dangerous behavior as the anticipation of an antisocial act towards others. The present-day dilemma of predicting dangerous behavior is discussed. An extensive review of sociological and psychiatric studies is presented. Further, the authors stress the vital importance of predicting violent behavior in view of statistical data concerning rampant violent crime in the United States. They encourage more cooperation between psychiatric experts and the judicial system in view of the common social problem all are faced with. Better diagnostic procedures and more logically deductive factual expert reports are hoped for. The authors postulate that prediction is strictly connected with the possible prevention of dangerous behavior and the continuation of a civilized, secure society.

KEYWORDS: psychiatry, mental illness, dangerousness, violent behavior, predictability, security

Diagnosis, prognosis, and treatment are the essence of the medical profession. The etymological root of the word *prognosis* derives from the ancient Greek *pro-*, meaning "before," and *gignoskein*, meaning "to know" [1]. While he may not actually have authored more than a half dozen of the 70 works of the so-called Hippocratic collection, Hippocrates, in the fifth century B.C., in works entitled *Prognostic*, *Coan Prognosis*, and *Aphorism*, is credited with the then-revolutionary idea that, by observing enough cases, a physician could predict the course of the disease. Many feel that these works have been the most important ones in freeing ancient medicine from superstition. Surprisingly, some 25 centuries later, in the field of psychiatry, there is controversy about the ability of practitioners and the extent to which they are able to predict behavior, particularly violent behavior, in their patients.

Rappeport [2], already in 1967, thought that psychotic people are not particularly prone to be assaultive or to commit suicide. The *Arizona Law Review* [3] questioned, in 1971, the accuracy of psychiatric predictions regarding dangerousness. Following the Kennedy assassination, an American Psychiatric Association study (reported by Rappe-

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port [2]) showed that the incidence of criminal behavior among former patients of mental institutions was not significantly higher than that among the general population.

Obviously, dangerous behavior is not necessarily a manifestation of mental illness, even though some crimes, because of their heinousness, are thought to be the outcome of a psychotic state. Society, appalled by such crimes and in self-defense, in an attempt to maintain the security of its social development, usually alienates the perpetrator. "Dangerous" as an adjective is attributed to something or someone that may bring about a harmful event. Accordingly, dangerousness, which does not take place in a vacuum but during an interrelationship among people in an evolving world, assumes a dynamic concept. A distinction should be made between prognosis as used in medicine, which relates to an intrapersonal body dysfunction, and prediction of dangerousness, which implies a behavioral manifestation that takes place on an interpersonal level. Prediction of dangerousness is the prediction of abnormal dangerous behavior and does not always correspond to a prognostic evaluation. Therefore, prediction of dangerousness is here intended as the anticipation of a dangerous act, usually directed towards others. Regardless of the semantics used, there has never been a greater need for the prediction of violent behavior in our society.

Sociological and Psychiatric Studies

In 1980, the number of homicides in the United States was 23 040, higher than at any previous time in this century [4]. As the years have gone by, the problem of violent crime has assumed frightening proportions. Statistics [5] reveal that 20 675 Americans were murdered in 1988, an increase of 2.9% over the previous year. The slayings occurred primarily in the nation's cities, which experienced a 4% increase in the number of murders. The number of murders increased 10% in the Northeast, 4% in the South, and 1% in the West, while the Midwest had a 3% decline in the number of slayings. The nation's overall murder rate was 8.4 per 100 000, but the major city with the highest rate, Washington, DC, reported a rate more than 7 times as high, 59.5 per 100 000. A recent report [6] states that, "although the federal government has not compiled nationwide statistics on killings in the first half of 1990, police departments in more than a dozen major cities report increases ranging from 10% to more than 50% over the figures for the first six months of 1989. It seems that the nation's murder rate, after dipping in the mid-1980s, has resumed a strong upsurge and . . . may even surpass the record year of 1980, when 23 040 people were slain." The above statistics clearly show that the prediction of dangerous behavior in our society is of vital importance.

The authors are aware of the many studies that take issue with the appropriateness and accuracy of clinical predictions of violence. Halleck [7] and Diamond [8] stated that objective data could not be offered in support of predictions of violence to justify the restriction of a person's freedom. Negative statements regarding the reliability of predicting future violence have been made by the American Psychiatric Association [9] and the American Psychological Association [10]. In 1978 the American Civil Liberties Union [11] categorically stated that mental health professionals have no expertise in predicting future dangerous behavior. A sizeable group of psychiatrists, psychologists, and lawyers surveyed by Kahle and Sales [12] gave a 40 to 46% mean predictive accuracy for violent behavior. In 1963, Szaz [13] had already stated that prediction of violence destroys the helping role of the mental health disciplines.

The difficulty in predicting dangerous behavior is well known and well accepted by all. "Science, particularly in its applied form, can never achieve the perfection and certainty of the law," says Tanay [14]. That should not be a deterrent in searching for guidelines that would make our diagnostic judgment more accurate, even though a 1958 legal decision relative to reasonable foreseeability (reported by Tanay [14]) does not facilitate the task at hand. In the midst of diverse, frustrating opinions that may have

produced a confusing forensic-psychiatric climate, the statements by Monahan [15] loom large as a stimulating, illuminating beacon: "There is nothing alien about using predictions of the future behavior of others to guide our conduct; it is hard to imagine life without such assumptions, both of the continuities and discontinuities of the behavior of others and without reliance on such assumptions. It would certainly be difficult to cross a city street; driving a car would be unthinkable." He further states, "Predictions of dangerousness are a necessary factor in regulating the relationship between individual and state. We are more concerned with the moral problem raised by the use of long-term predictions of violent behavior, predictions concerned with months and years, not hours and days." Violent behavior has become so rampant in our society during the past decade, because of the widespread use of drugs and an ever-increasing impulsive unleashing of hostile feelings in families and society at large, that a better effort should be made to anticipate, and so prevent, "acts characterized by the application of overt threat of force which is likely to result in injury to people" [16].

One should be aware that, at times, violent behavior is not reported to the police. According to the 1978 National Victimization Panel [17] only 47% of those persons who stated that they had been the victim of a violent crime reported the act to the police.

In the field of psychology Freud, himself, dealt with the problem of human aggressiveness (reported by Becker [19]). He stated that human aggressiveness comes about through a fusion of the life instinct with the death instinct. The death instinct, representing the organism's desire to die, would be changed into redirecting these negative impulses outwardly. Dying, or the desire to die, would be replaced by the desire to kill, and the basic death instinct would then be defeated. Contrary to Freud's idea, Otto Rank, one of his pupils, stated beautifully (as reported by Becker [19]), "The death fear of the ego is lessened by the killing, the sacrifice, of the other; through the death of the other, one buys oneself free from the penalty of dying, of being killed." Rank had a profound and existential approach to the problem at hand.

Much closer to us, Karl Menninger [20] attempted to explain human aggression with his theory of dysfunction/dyscontrol. He claimed that an explosive, destructive act, or a series of acts, is the outcome of internal disorganization, ego weakness, and its incapacity to control basic, dangerous impulses. He thought that chronic, repetitive, aggressive behavior, or episodic, impulsive violence, such as homicidal assaultiveness, could be explained in this manner. A recent study [21] confirms this, "A decompensating patient with poor impulse control may be at risk for violence in the community regardless of the diagnosis." In that study, the diagnoses of both schizophrenia and mania were associated with dangerous behavior, and many patients were more unpredictable and emotionally explosive during the first period of their hospitalization.

The psychological predicting factors of a childhood history of maternal deprivation, poor father identification, nocturnal enuresis, fire-setting, violence towards animals, and abuse by one or both parents cited by Goldstein [22] do not necessarily hold true. Indeed, Diamond [8] stated, "Yet I have repeatedly found some, and sometimes all of these predictive factors, in individuals who have never committed even the slightest harmful act, let alone assault or murder. I have examined offenders who have committed the extraordinarily brutal acts of great violence and lethality who possessed none of these factors." It must also be pointed out that the original pioneer studies of the use of the Minnesota Multiphasic Personality Inventory (MMPI) in order to predict delinquency [23], especially those using the psychopathic deviate (Pd) scale, were recently found to be inconclusive by several surveys. The most recent of these is that of Tannenbaum in 1970 [24].

Without getting involved in the dispute between the nature and nurture theories of the origins of criminal behavior, we must recognize that the majority of the inmates in jails in the United States have a low-normal intelligence quotient (IQ), as has been established by psychometric testing. The contention that IQ scores are strongly related

to crime has been supported by Hirschi and Hindelang [25], who concluded that "the weight of evidence is that IQ is more important than race and social class for predicting criminal behavior." The above view has also been supported by more recent research by Moffitt, Gabrielli, Mednick, and Schulsinger [26]. In their Danish studies, they concluded that children with low IQs may be more prone to engage in delinquent behavior. Those children also failed in school because of their poor verbal ability. "Such initial experiences may contribute to later delinquency in many ways: by creating a negative attitude towards authority . . . seek[ing] awards in a less socially desirable setting . . . [being] more sensitive to delinquent peer pressure."

The study by Wolfgang, Figlio, and Sellin [27] and that by Wolfgang [28] stress the importance of a juvenile record in the past life of an adult offender and point out that variables of race and socioeconomic status were most strongly associated with reported delinquency. These findings confirmed the classical study by Wolfgang and Ferracuti [29].

An article by Yesavage, Werner, Becker, and Mills [30] points out that the psychiatrists they reported on in their study used patients' hostility as a predictor of future violence. They also stressed the importance of suspiciousness, tension, excitement, and a prior assaultive act as predictors of dangerous behavior. Monahan's model [31], in assessing dangerousness, blends three types of prediction: anamnestic, actuarial, and clinical. His suggestions are for a short-term and specific prediction of dangerousness. Among the various traits described by Ostrov et al. [32] in assessing dangerousness, we find poor reality testing, thought disorder, paranoid thinking, excited rage, impulsivity, and superego deficit. He emphasizes the lack of coping skills, of empathy, of introspection, of the ability to reach out for people, and of a sense of humor. Bidinotto [33] lists the following dangerous traits of the serial killer: he or she shows less regard for the rights and feelings of peers, irresponsibility, disregard for authority, failure to abide by rules and regulations, and lack of moral conscience. In addition, a correlation has been made between the MMPI scales and hostile, explosive, psychopathic, violent behavior, and between the Rorschach test color responses and impulsivity and manifest hostility (reported by Starke, Monachesi, and Young [23]).

The study by Tancredi and Volkow [34] brings to the debate some neurophysiological factual understanding of violent behavior. Indeed, positron emission tomography (PET) studies reveal that defects in brain functioning are related to particular behavior and that specific defects may be at the basis of an individual's dyscontrolled acting out. The recent study on schizophrenics by Adams, Reid, and Moritz [35] supports the thesis that outpatient histories of violence, especially severe histories, are associated with neurophysiological dysfunction. In addition, when diffuse neurophysiological brain dysfunction leads to violent behavior, "such behavior tends to be recurrent or perseverative—an ongoing trait . . . This would tend to explain the presence in the IMP group—neurophysiological impaired schizophrenic (Luria Nebraska Neuropsychological Battery) tested by Golden, Hammecke, and Purish [36] of the very highest 'career violence' individuals." The study by Jarvie [37] that showed the frontal lobe region lesions acting as a disinhibitor of social control was further corroborated by a study by Blumer and Benson [38]. The study of Grafman et al. [39] stresses the tenet that psychiatric sequelae and personality changes are common following frontal lobe damage. A pseudopsychopathic personality characterized by a lack of impulse control, irritability, anger, and hostility usually ensues from orbitofrontal lesions. Results of these studies suggest that chronic, recidivistic, violent behavior, even though a minimal part of the larger bulk of criminal offenses, may have a biological and neurophysiological predisposition. That predisposition also derives from a rather complex interaction between multiple genetic factors and their reaction to the environment [40]. One can hope that in the near future higher technology, including single photon emission computed tomography (SPECT), will also help in the prediction of dangerous behavior.

The most important variable in the prediction of violence, says Stone [41], is the actual past criminal conduct. This tenet accords with a major dictum of Freudian psychoanalysis, that history is the best prediction of future behavior. Even though one fully agrees with Stone's statement, its limitations must be recognized when confronted with individuals whose past does not show overt criminal behavior.

The American Psychiatric Association (APA) task force members [9] who investigated the problem of predicting future dangerousness have come up with opposite, controversial, and confusing statements, such as, "Judgements are fundamentally of very low reliability Past behavior must be clearly repetitive Recidivism is specific to the previous crime Immediacy of harm, likelihood of harm, cannot be stressed strongly enough Some persons are at a comparatively higher risk for future violence than are others." Karl Menninger [20] warned us, "It is the possibility of unusual behavior that we have to anticipate and predict." Hans Toch [42] includes among types of unusual behavior "the unstable, who may shoot because of a propensity to be clumsy, boisterous, fearful, touchy or sadistic."

False-positive predictions of dangerousness also raise a problem. Wettstein [43] in 1988 stated, "Predictive reliability and accuracy remain poor, and significant numbers of false positive predictions continue to be made." In a study by Kozol, Boucher, and Garofalo in 1972 [44], it is reported that staff incorrectly predicted violence two times out of three. The study by Cohen, Groth, and Siegel in 1978 [45] showed, on the contrary, that 86% of staff predictions were correct.

In addition, moral and political issues have been raised by the questionable prediction of dangerous behavior. Von Hirsch aptly stated [46], "Predictive restraint poses special ethical problems. The fact that the person's liberty is at stake reduces the moral acceptability of mistakes of overprediction. Moreover, one may question whether it is ever just to punish someone more severely for what he is expected to do even if the prediction was accurate."

In the midst of such diversity of opinion, the California Supreme Court with *Tarasoff II*, in 1976, created a legal duty for mental health professionals to diagnose and predict dangerousness [47]. Many experts have concluded that the prediction of dangerousness is more a sociolegal judgement and that dangerousness itself is neither a psychiatric nor a medical diagnosis. The previously mentioned APA task force report [9] also stated, "Some persons are at a comparatively higher risk for future violence than others." It is exactly those "some persons" that one would like to detect and predict. Many authors have stated that it should be up to the judiciary to assume the responsibility for making such a sociolegal determination. However, psychiatric or psychologic expert testimony could certainly help the judiciary in reaching such a difficult responsible decision as the prediction of dangerousness.

Reflections

One should not deduce the possibility for future dangerousness from an isolated, individual trait, even though it may have the connotation of dangerousness. It should be remembered that violent and dangerous acts are relatively infrequent, occur in rather specific interpersonal and situational contexts, may be state dependent (under the influence of alcohol or other drugs), and may not be representative of the individual's more typical behavior. In favor of intuitive clinical judgement over actuarial predictions of violence is the statement by Meehl [48] that "clinical judgement may be the only feasible short-term prediction strategy especially in emergency situations."

The authors fully agree with the statement by Cohen, Groth and Siegel [45], "It is a perilous, narrow path . . . to balance order and liberty properly . . . a socio-political and not a clinical issue and this must be done by society's courts and legislature. The experts should not attempt to usurp society's rights in resolving the conflict between safety and

liberty." However, the views of Morris and Miller [49] should not be disregarded, as when they aptly state, "A merciful and just system of punishment presupposes leniency towards those who least threaten social injury; and this, in turn, inexorably involves predictions of dangerousness." Peszke's [50] concern with the welfare of the individual should also be kept in mind.

The psychiatry/psychology experts have psychiatric/psychological knowledge regarding the individual assessed by them. Their participation as professionals in the forensic field and the very fact that they, themselves, are members of society should make them welcome and appreciated in such important and complex decisions. Even though the prediction of dangerousness is a difficult task, one can assume that the forensic psychiatrist's knowledge and experience can provide better expertise than those of Szaz' [51] common man.

The study by Coccozza, Melick, and Steadman [52] revealed that the higher rate of violent crime committed by released mental patients can be accounted for primarily by those patients with a record, particularly an extensive record, of criminal activity that predated their hospitalization. Nonetheless, the deinstitutionalization of the late 1960s accounts for a large group of misdemeanants who occasionally, under stress, may become violent offenders. Most of the violent offenders, however, are young, unmarried, unskilled, and prone to the use of drugs and alcohol [53].

The studies by Wolfgang [54] and by Petersilia, Greenwood, and Lavin [55] provide reasonable, accurate estimates further supporting the validity of clinical predictions of violence. Petersilia, Greenwood, and Lavin [55] also state the following, "One third of the individuals predicted to be violent who were arrested for a violent crime are, in fact, the same people who are committing most of the unreported and unsolved violent acts." And even though there is no consensus regarding the relationship between mental disorder and violent behavior, the recent study by Collins and Baily [56] reports that Howells, in 1982, after reviewing relevant studies, concluded that "the link between depression and serious violence, such as homicide, is the most widely accepted in clinical practice." The study by Bland and Orn [57] "found recurrent depression . . . an important factor in family violence." On the other hand, Monahan's [16] statement, "Mental patients who do not have a record of violent arrests are, if anything, less violent than the general population," should always be taken into consideration. The evaluation of future dangerous behavior, therefore, should be an integration of clinical psychiatric judgement and legal assessment.

The following factors should be taken into consideration by the expert when assessing the probability of an individual's future violence: *Sociological and environmental variables*—the age, sex, race, and employment status of both possible offenders and possible victims; relationship between offender and victim; base rate for violent behavior; previous history of physical force to resolve conflicts; previous arrest records, in particular for offenses against the person, including aggravated assault; exposure to violence in the family; lack of social competence; purchase of a gun; problems with authority figures or distortion of relationships with men or women; availability of victims, availability of weapons, availability of drugs; drug and alcohol use; city dwelling; cultural and subcultural group; and climatic conditions. *Psychological variables*—unstable disposition, impulsivity, and proneness to act out against others in a disruptive, destructive way; lack of emotional concern for others; aggressive fantasies and planning of vengeance; lack of inhibitions; deeply repressed hostile feelings; depression or dysthymia; delusions of persecution; previous institutionalization, either in a mental hospital or a prison; previous threats to kill; loss of consensual view of reality; inability to cope with anger and hostile impulses; acceptance or nonacceptance of guilt and personal responsibility for violent acts committed or fantasized. *Biological and neurophysiological factors*—47-XXY or 47-XXY chromosome; low IQ; head injury; electroencephalogram (EEG) abnormalities; temporal lobe epilepsy; limbic ictus; tumors and neurophysiological dysfunction of the frontal lobe.

It is legitimate to presume that an individual whose psychiatric-legal history reveals several of the above personality traits or historical, genetic, or neurophysiological factors might, in all probability, and to a reasonable degree of medical certainty, have a higher propensity to act out in a violent way against others.

Perusal of the literature reveals that most of the factors listed above have already been described in the past by many authors [15,18,30,32,33,42,58–63]. Nonconsideration or downright dismissal of past observations and reflections deprives one of the benefits derived from history. Therefore, it would be advisable to search for the presence of the above factors in assessing the probability of dangerousness. We firmly agree with Thompson [64] that “race, in the absence of any other qualifying or confounding variable, may not be a predictive factor for future violence.”

It is also legitimate to presume the possibility of future dangerousness in a person who committed a crime in circumstances that were not in all probability conducive to a criminal act. Monahan [15] recently stated, “We are talking of murder, rape, robbery, assault, and other forms of violent behavior. There is a widespread social consensus, which transcends political, racial, and economic groupings, that such activities tear at the already frayed social bonds holding society together. It seems to me that when we lend professional assistance, however marginal, to improve society’s control of those who will murder, rape, rob, and assault—provided that we do not let the nature of that assistance be overstated or distorted—we have nothing for which to apologize.”

As to expert testimony, the statement by Gerin [63] still holds true: “The psychiatrist does not have to make a legal evaluation of a defendant. That pertains to the magistrate. He or she, the forensic expert, must evaluate the psychopathology of the offender and his [or her] report must be complete, objective, and logically deductive, and, from symptoms to diagnosis, must be pursued above and beyond theoretical, sociological, philosophical, or psychiatric views.” Gerin’s approach and the previously reported statement by Monahan [15] find, fortunately, a great deal of support in a large stratum of unknown, but reliable, forensic psychiatrists/psychologists and jurists. Obviously, objectivity and equanimity should be maintained.

Conclusions and Suggestions

Such statements as “to predict that one is dangerous is safer . . . ,” or “a person released as not dangerous can cause great harm” [41] summarize the quandary in which the most profound thinkers in these matters find themselves. In this regard, the psychiatrist/psychologist should be cautious not to overpredict dangerousness and should not confuse an increased risk of dangerousness with reasonable medical certainty that an individual will be dangerous. It is possible that the difficulty one encounters in assessing dangerousness is due not only to the many variables that must be assessed in order to reach an accurate prediction, but also to a climate of limited responsibility and relativism in present-day society. It is also possible that this societal trend has, at times, unconsciously influenced some experts—they, themselves, members of society—in generating reports which, although sufficiently supported by factual data, fail to express a clear opinion regarding the potential dangerousness of an individual they have examined. This may result in further doubts, in the eyes of the courts, regarding the credibility of the forensic expert’s testimony, to the point of questioning the mental health professional’s ability to contribute adequately in the prediction of violence. These doubts can be largely assuaged if psychiatrists and psychologists take care to substantiate their prognostications of dangerousness on the basis of the preponderance of credible scientific and clinical data available. Actually, the judicial system may tend, at times, to believe that psychiatrists/psychologists, often at variance among themselves, agree no more frequently than other health and criminal justice personnel in their assessment of dangerousness. To this effect, the institution of an appointed panel of experts—comprising an attorney, a psychiatrist or psychologist, a sociologist, and a violent crimes expert—who, together, would

examine the supposedly dangerous individual, could probably bring about, through the sharing of responsibility, greater objectivity, better acceptance of their reports, and fewer recriminations.

The present-day social climate is disorderly and confusing and, at times, frightening. What has been thought of as the abdication by the judiciary of its responsibility in making legal decisions as to the future possible dangerousness of defendants should not also create a reluctance in the forensic psychiatrist or psychologist to participate fully in an important multidisciplinary decision. They, even though limiting their role to providing an estimate of the probability of future violent behavior, would make, in so doing, their expertise not only a source of valid professional communication but also of humane interest. The attempt to predict dangerousness is necessary in order to keep our civilized world together and our daily living as secure as possible. The possibility of identifying individuals with some increased risk of dangerousness could be enhanced if the examiners, during the joint psychiatric, psychological, and legal assessment, would take into consideration the sociological, environmental, biological, and neurophysiological factors suggested above. The examiners should be cognizant of the fact that short-term prediction of dangerous behavior, although a difficult task, can probably be made with better accuracy than long-term prediction. Indeed, as far as long-term prediction of dangerousness is concerned, we are lacking, because of obvious ethical considerations, supportive scientific studies. Furthermore, it is to be assumed that no professionally competent and ethically bound forensic psychiatrist or psychologist would ever claim a level of absolute certainty and confidence in the determination of either short- or long-term future violent behavior. However, an attempt should always be made to better our expertise and to base it on a maximum of factual data and, if available, scientific evidence. In addition, proposals should be made in the case of seriously dangerous individuals for brief periods of detention in order to further observe their behavior. Such provisions clearly would have to be made within narrowly drawn guidelines to survive constitutional scrutiny. The law in some states already provides mechanisms for short-term detention of individuals where there is merely probable cause to believe that the offender is dangerous, provided, however, that within a short, limited period of time he or she is given a full evidentiary hearing as to the need for further detention. In some states, such as Wisconsin, these mechanisms are available in both civil and criminal law. Section (§) 969.035 of the Wisconsin Statutes [65] provides a procedure for preventative detention in cases of murder, sexual assault, or sexual assault of a child, or if there is a history of previous violent behavior. Preventative detention of allegedly violent persons also exists in the Federal Court system [66]. At the same time, a negligent and indifferent attitude towards this basic social issue should be condemned and avoided. Good professional expertise, coupled with awareness of the present-day social climate and common sense, should be at the basis of simple, clear, and logical forensic reports. And, without any doubt, experts' opinions, based on and supported by factual evidence, would establish a better and more realistic communication and cooperation with the courts, supporting Franco Ferracuti's statement [67], "The mental health system and the criminal justice system in any given country are interlocking and complementary parts of the same deviance control apparatus within a society that is trying to cope with and care for the various and changing groups of defendants."

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