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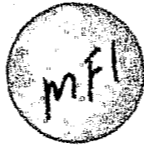
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EXPLAINING VIOLENT BEHAVIOR

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I. INTRODUCTION

Of all the types of behavior, the violent forms have perhaps realized the widest and most intensive study. Analyses of physically assaultive conduct have been informed by perspectives circulating at each level of the disciplinary hierarchy, ranging from biological and psychological approaches to sociological, cultural and cross-cultural orientations. In this overview, we shall treat the more current and influential formulations within those disciplines whose distinctive perspectives have been used to study the causes, development and cessation of violent behavior.

Before reviewing the various explanations of violence, we have some preliminary remarks. First, dialogue and debate about the causes of violence have often turned into heated controversy, with passions inflamed more by philosophical or political ideology than by scientific principles and convictions. To cite what might be the clearest example of this, biological explanations have been periodically rejected by sociologists as deterministic— as implying a set of organic factors which exclusively drive or control the onset and course of violent behavior. Concern has arisen that such a stance might lead to "predatory ethics" embracing medical techniques (e.g., eugenics, psychosurgery, etc.) as part of a general strategy of violence prevention and control (Shah and Roth, 1974:102-103).

At present, however, a more moderate and reasonable position prevails. Biological and sociological (as well as other nonorganic and environmental) factors are thought to interact with one another to make violent behavior more or less likely to occur. Biological endowments, for example, present the organism with a behavioral range or potential and not with immutable behavioral traits or

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realizations. These innate somatic attributes interact with social influences in a developmental (maturational) process which results in behavioral performance, one form of which may be violent conduct. Within the biologically established bounds of potential behavior, a wide array of conduct may be selected and pursued based upon various kinds of social considerations, including moral convictions or pragmatic concerns.

We take the position, as do most of our colleagues, that all factors hypothesized to influence violence interact in the manner just described. Biological, psychological, sociological and other factors set behavioral bounds and options: The likelihood that violent conduct will occur depends upon the substance and strength of the factors involved in any particular case.

Second, we shall delimit the following treatment of theoretical and research materials to those that bear upon the problem of individual violence. Explanations of collective violence (like labor or racial strife or political conflict resulting in war) are beyond the scope of our concern. We emphasize theoretical hypotheses which pertain to the more extreme forms of individual aggression and assaultive behavior. These acts are generally so grave that most societies have, in addition to developing informal rules for their regulation and sanction, prohibited them through formal legal enactments. Through statutory prohibition, these violent behaviors are transformed into crimes and, as such, are subject to governmental sanction. (Included among the individual crimes of violence are personal crimes such as homicide, forcible rape, robbery and aggravated and simple assault, and property crimes such as arson and vandalism.)

Individual (interpersonal) violence will here refer to the use or threatened use of force by one party against another or against the property of another (usually against the will of the latter) for the purpose of obtaining an emotional or instrumental goal. Aggression is a more general conception than violence and will refer to the various kinds of agonistic behavior (e.g., violent, competitive and/or domatory conduct) and to the biological or psychological capacity or potential (readiness) to engage in such behavior.

II. BIOLOGICAL HYPOTHESES

Considerable and strong evidence has been mounted that establishes the relationship of biological factors to aggression and violence. Shah and Roth (1974), in a major contemporary overview of these links, divided biological influences into two groups: those that are "more directly related" and those that are "more indirectly related" to violent behavior (p. 110). In the former, the authors included tumors and other destructive or inflammatory processes of the limbic system of the brain, the continuum of epileptic cases (behaviors occurring during, just after and between seizures) and endocrine abnormalities. Factors "more indirectly related" to violence are birth complications (i.e., perinatal difficulties), minimal brain dysfunction (MBD) and related neurological abnormalities, hyperactivity, genetic structures, chromosomal abnormalities, body or constitutional type and psychophysiological functions related both to learning and psychopathic disorders (pp. 110-111). Mednick et al. (1982) have partitioned the literature on biology and criminal violence into the following areas: genetic studies, sex differences in aggression, autonomic nervous system research, neurophysiological and neuropsychological evidence and pharmacological and biochemical factors. Another recent literature review (Wolfgang et al., 1983) has identified the follow-

ing set of biological influences: genetic evidence, psychophysiological and neurophysiological research, neuropsychological data, hormonal research, physical growth and developmental evidence, prenatal and perinatal events, MBD and diet and nutrition.

Biological treatments of human aggression and violence often begin with discussions of genetic factors. Evidence indicating such a linkage has been drawn from experimental and ethological studies of animals, from human family, twin and adoption studies and from research on human chromosomal abnormalities. It is well known, for example, that selective breeding of certain strains of animals (such as mice) can increase their aggressive traits relative to other selectively bred strains. These results are consistent with work done by several ethologists (e.g., Lorenz, 1966; Tinbergen, 1951) who have conducted elaborate observational studies of animals to assess the evolution and functions of species-specific behavior such as aggression. These studies assert that aggressive animal behavior is instinctive (i.e., heritable through genetic transmission) because it appears to be unlearned, resistant to change and similar in all members of a species (Schuster, 1978). One of the better known and more debated ethological theories was developed by Lorenz (1966) who argued the following points: that aggression is adaptive in animal populations (for instance, it functions to

disperse members more evenly over sustaining territories, to control sexual rivalry and mating and to produce a stable "social" organization), that aggression is ritualized (stereotyped) in such a way as to minimize injurious and lethal conflict among the members of a species (such as through appeasement postures) and that aggression is propelled by the build-up of aggressive motivation (drives) which presses to be released periodically (Schuster, 1978). Viewed in this way, animal aggression is not uncontrolled attack behavior but is well-defined activity within the specific contexts which trigger it. The aggressive drive and its corresponding behavior are, then, eminently functional.

Although animal research on the heritability of aggression and violence cannot be accepted uncritically as applicable to human conduct (to do so ignores important species differences), such efforts have nevertheless provided important and suggestive evidence in this regard. These hypotheses have received support from several quarters, specifically from human family, twin and adoption studies and from investigations of human chromosomal abnormalities.

Family, twin and adoption studies use the aggressive and violent behaviors of biological relatives as indicators of genetic transmission. When biological relatives (e.g., twins) exhibit the same behavior (e.g., violence), they are said to be concordant in that behavior and, conversely, when biological relatives show dissimilar behavior, they are said to be behaviorally discordant. If genetic factors indeed play a part in shaping violent and antisocial behavior, then biological relatives (for instance, biological parents and their offspring) should be concordant more often than nonbiological relatives (for instance, adoptive parents and their adopted children). Alternatively stated: Persons who are most alike genetically should be most alike behaviorally (under similar environ-

mental conditions) if genetic components are causal contributors. Identical twins (developed from the same ovum), for example, would be expected to have a higher concordance rate than fraternal twins (matured from different ova).

Christiansen's (1977b) review of eight major twin studies showed that nearly two thirds of the identical twins were concordant for officially designated criminal and delinquent behavior, whereas less than one third of the fraternal twins were concordant. Christiansen's (1977a) own study of twins born in Denmark between 1881 and 1910 indicated that identical twins had a criminal concordance rate 2.7 times higher than that of fraternal twins. Other research has confirmed these results (Dalgaard and Kringlen, 1976).

One problem with twin studies, however, is that genetic and environmental influences cannot be disentangled easily. The high concordance rate for identical twins, for example, may be due to the fact that they are treated very similarly by other people.

Adoption studies have proven useful in sorting out biological and social influences. If biological influences, such as genetically heritable factors, to some extent produce violent behavior, then persons who have been adopted at birth should exhibit behaviors more like their biological relatives (parents, for example) than their adoptive relatives. Research supports this position. Hutchings and Mednick's (1977) study of male adoptees showed that the highest proportion of adopted sons had official criminal records if the biological fathers were also criminals. Studies in antisocial personality and other psychiatric disorders are in accord with these findings: Adoptees show a high concordance rate with their biological parents (Cadoret, 1978; Crowe, 1972, 1974, 1975; Schulsinger, 1977).

Chromosomal abnormalities have been implicated as a possible cause of violent behavior. Normal human cells have forty-six chromosomes which carry genetic material (genes). Forty-four of these chromosomes are related to bodily structures and processes. The remaining two determine the sex of the individual. (The male chromosome has been designated by the symbol Y and the female analogue by X. Females have an XX configuration, whereas males exhibit an XY pair.)

Two sex-related irregularities have received especially widespread attention over the last several decades—the XYY anomaly (the "super-male") and the XXY syndrome (Klinefelter's syndrome). In the former case, it has been suggested that the extra Y (male) chromosome might predispose a person to heightened aggressivity. A number of surveys of men (especially of tall men because they appear more likely to have the additional Y chromosome) in institutions for the mentally ill and subnormal and for offenders have shown a higher prevalence rate than noninstitutionalized populations. Contradictory evidence has also been found, however. The equivocal nature of the evidence calls into question the validity of the "super-male" thesis, particularly as it relates to seriously violent behavior.

Work conducted on the XXY syndrome has shown that, in addition to the physical irregularities exhibited by these males (sterility, diminished facial hair, enlarged breasts, etc.), they also have a high vulnerability to mental disorders, especially sexual disturbances (e.g., homosexuality, pedophilia and transsexualism). Higher rates of criminal and antisocial behavior have also been indicated. Despite this suggestive evidence, Klinefelter's syndrome has not been demonstrably related to male violence.

Antisocial behavior has been linked to autonomic nervous system (ANS) functioning. One aspect of the ANS is that it mediates physiological activity associated with emotions. Peripheral (i.e., nonbrain or central nervous system) signs of ANS activity include cardiovascular activity (e.g., heart rate and blood pressure), electrodermal activity (e.g., galvanic skin response—GSR—or electrical activity of the skin), respiration rate, muscle tension, pupillary size and so on.

Several indices (especially the GSR) of ANS activity have been used to investigate the relationship between emotional arousal (timing, degree and types) and the ability to anticipate and learn from punishment. Particularly important in this regard have been studies of psychopaths, for they show a relative lack of emotion (incapacity to love, lack of remorse or shame, absence of nervousness or other psychoneurotic traits and the inability to learn from punishment, to foresee negative consequences or to be socialized) (Cleckley, 1964; McCord and McCord, 1964).

The basic theme underlying psychopath studies is that the extreme emotional underarousal of these persons makes them highly resistant to learning through punishment to refrain from socially unacceptable behavior (e.g., violence). Because psychopaths are physiologically and emotionally underaroused, they have a diminished capacity to fear punishment. Consequently, these persons have a reduced need to anticipate and thereby try to avoid punishment by inhibiting objectionable conduct. While results are not conclusive, findings indicate that psychopaths, delinquents and prisoners show less or no physiological (ANS) apprehension of punishment to themselves or others when compared to nonpsychopaths, nondelinquents and noncriminals (Mednick *et al.*, 1982:33, 36-38). Few studies

have focused on violence, but those that have done so show lower ANS activity among persons exhibiting the more serious behavioral disorders (Mednick *et al.*, 1982:44).

Central nervous system (CNS) structures (particularly the limbic or "visceral" areas of the brain) and processes (i.e., neurophysiological activity) are known to influence emotion (fear, anger, rage), aggression, sexual activity and other related behaviors. Limbic regions of special importance are portions of the thalamus and hypothalamus, upper parts of the brain stem and contiguous areas. When it is functioning normally, the limbic area is integrated with those brain structures which inhibit behavior (Shah and Roth, 1974:112). Disease, injury and other insults to these CNS locations can, however, reduce the threshold (i.e., increase the readiness) at which sexual or aggressive responses are activated (Shah and Roth, 1974:115). Mednick *et al.* (1982:54-55) and Shah and Roth (1974:114-115) have summarized the major research in this area. Experimental stimulation and surgical alteration of selected areas of the limbic structure have been shown to induce or modify emotional activity related to aggression (Shah and Roth, 1974:114-116).

A high prevalence of epileptic disorders, which involve an unusually high neuronal discharge within the CNS (resulting in a seizure or "fit"), has been found among repeatedly assaultive offenders and psychopaths (Shah and Roth, 1974:118-119; Mednick *et al.*, 1982:49). Evidence has not shown conclusively that assaultive activity occurred during the epileptic episode, however.

One approach to studying epileptic disorders is to perform electroencephalographic (EEG) tests on various populations. This procedure traces the minute electrical oscillations (brain waves) emitted by the cerebral cortex. Although

the research using this technique has had serious methodological flaws (Wolfgang et al., 1983:60), some studies have found evidence of a disproportionate number of seriously violent offenders (murderers and assaulters) and repeat offenders with various kinds of EEG abnormalities, such as an excess of either fast or slow activity and temporal lobe epilepsy (pp. 60-62; Mednick et al., 1982:47-48).

Substantial research indicates anatomical and functional differences in the two (left and right) cerebral hemispheres. Psychological functions appear to be localized in a single hemisphere ("lateralization"). For example, the left hemisphere specializes in processing verbal material, such as language, in a sequential and analytical mode whereas the right hemisphere specializes in processing nonverbal material, such as spatial functions, in a nonlinguistic, holistic and synthetic manner (Wolfgang et al., 1983:68). Valid and reliable (neuropsychological) cognitive tests have been devised to measure each of these hemispheric functions. Normal subjects score similarly on verbal and spatial tests. Several studies have shown, however, that subjects with behavioral disorders (delinquents, psychopaths and repeat criminals) tend to score lower on verbal tests but score at the average or above average levels on spatial examinations, indicating an imbalance in hemispheric functioning (Wolfgang et al., 1983:70-72).

Other evidence relating CNS activity to behavioral disorders has come from studies of MBD and hyperactivity, a related disorder. Persons classified as MBD or hyperactive are of average intelligence yet show behavioral and learning disabilities (including overactivity, impulsivity, emotional shifts, a short attention span and antisocial conduct). Both disorders have been related to school failure and delinquency (Shah and Roth, 1974:129-131; Wolfgang et al., 1983:90-91).

Several chemical substances produced by or ingested into the body have been related to aggression and violence. (These are the pharmacological and biochemical influences.) Important in this regard among the internally produced substances are testosterone (the male hormone) and glucose (blood-sugar). Significant externally produced substances are alcohol, amphetamines and barbituates. Research indicates that males are usually more aggressive than females, even before the school years (up to age 6), indicating that biological rather than gender-related child-rearing practices may be the more influential determinants of aggression during the earliest years (Wolfgang et al., 1983:74).

These results and others point to the influence of the male hormone, testosterone, on aggression. Studies of violent male offenders, for example, have shown that these men have higher testosterone levels than nonoffenders and, further, that the more seriously violent subgroups have the higher testosterone levels. (Mednick et al., 1982: 30-31, 63).

Low blood-sugar (hypoglycemia) has been well-established as related to CNS functioning, particularly to impaired cerebral functioning (Mednick, et al., 1982: 63-64, Shah and Roth, 1974: 125-126). Fatigue, irritability, aggression and, occasionally, rage are initial concomitants of reduced blood-sugar. Despite the suspected and often asserted relationship between hypoglycemia and violence, research is still tentative in this regard.

Researchers agree that nonmedical drug consumption is implicated in violent behavior, though not in a simple causal fashion. The influences of alcohol on violence have been most widely documented. A high proportion of criminal homicides, forcible rapes and assaults involve at least one participant who has ingested some kind of alcoholic beverage (Mednick, et al., 1982: 58-60, Wolfgang, et al., 1983: 46). The depressant and disinhibitory

effects of alcohol in combination with social setting factors facilitate aggressive exchanges. Accumulating research has also begun to link barbiturate and amphetamine abuse to assaultive behavior.

Studies on the chemical determinants of aggression and violence have spurred interest over the last few decades in dietary and nutritional deficiencies which can result in chemical imbalances in the body (Wolfgang, et al., 1983: 93-95). Though few well-conducted studies have been done on the relationship between diet and human behavior, some research has reported finding higher rates of vitamin deficiencies, food allergies and, as was mentioned earlier, hypoglycemic symptoms among delinquents and criminals (and other disordered individuals) (pp., 93-94). There is reason to believe that some behavioral disorders can be improved through dietary interventions (e.g., reductions of sugar, allergy-producing foods, and food chemicals).

Complications during pregnancy and delivery (prenatal and perinatal events, respectively) have been related to subsequent disability (Wolfgang, et al., 1983: 82). The relationship has been formulated as a "continuum of reproductive casualty" ranging from fetal deaths to a variety of progressively less grave forms of brain impairment (cerebral palsy, epilepsy, mental deficiency and childhood behavioral disorders). Pregnancy complications and birth stress can, through these malfunctions, result in physical or behavioral disorders, delinquency and other antisocial conduct (p. 83).

Analyses of the relationships between constitutional (body structure or physique) factors and violent and antisocial behavior have had a long tradition. Deficient physical growth has been associated with prenatal deficits

such as premature birth and low birth weight (Wolfgang et al., 1983: 79). Reports have also shown a higher incidence of short stature and obesity in children exhibiting MBD symptoms. These growth and CNS deficits have, in turn, been related to other physical disorders and to behavioral problems and delinquency (pp. 80-81).

Some suggestive work on body structure and criminality has appeared. Findings have tended to indicate that delinquents and criminals are physically superior to nondelinquent comparison groups. The "delinquent" body type is generally more muscular, athletic and bony than the "nondelinquent" body type (Shah and Roth, 1974: 141). The mechanism by which physique might affect serious and assaultive delinquency and crime is not well understood, however. Hypotheses range from direct effects of biological processes on behavior to indirect effects of societal responses to and the socialization of persons having particular physiques (Shah and Roth, 1974: 139-141). Body type has also been related to personality and temperament and, in turn, to behavioral patterns. Methodological problems with research on constitution and antisocial behavior make conclusions in these regards tentative and suggestive.

III. PSYCHIATRIC, PSYCHOANALYTICAL AND PSYCHOLOGICAL FORMULATIONS

Theories and studies of human mental functioning have provided some of the most longstanding, dominant and controversial approaches to understanding behavior, most notably the more physically and socially harmful forms of deviant and unlawful conduct. Psychiatry is perhaps the oldest of those approaches concerned with mental analyses. As a speciality of medicine, psychiatry views the

causes and courses of behavior and its related mental processes in terms of medical concepts and metaphors, most importantly, the illness-health continuum. Consequently, psychiatry is concerned primarily with the study, diagnosis, treatment and prevention of behavioral and mental disorders. Central to this perspective is the identification of psychological abnormality and pathology.

The psychiatric literature on violence is substantial. Much of it has been reviewed by Wolfgang and Ferracuti (1982), who have focused on homicide. Much work has appeared as clinical case studies that detail and explain individual psychological dynamics and pathological developments. Recent studies have been broader in scope and have examined either psychological disorders in criminal (generally prison) populations, often focusing on violent prisoners, or violent (criminal and noncriminal) behavior among released mental patients (Guze, 1976; Monahan, 1981; Monahan and Splane, 1980; Monahan and Steadman, 1983).

Psychiatry does not have an integrated conception of the psychopathology

of violence, and probably will not because of its eclectic character. We have described, for example, some of the diverse and complex biological relationships which appear to operate. Psychological approaches are just as numerous and complex. Though psychological perspectives on the psychopathological roots of violence are many, one theme which often emerges is that of psychological conflict or stress (Halleck, 1967: 51-53). For example, the competing demands of sexual or aggressive drives and motivations and of (social and physical) environmental factors may place the individual in the midst of progressive or recurrent psychological conflict about how to modulate these oftentimes opposing forces in a personally and socially appropriate way. From this standpoint, violence is one kind of adaptive behavioral strategy, and may be considered maladaptive when, among other things, it is an expression or precipitant of mental pathology. Substantial, intense and enduring conflictual demands can result, depending upon the specific features of the case, in psychopathology, including functional psychoses, psychoneuroses, psychosomatic disabilities, personality disorders, manic and depressive states, behavioral disturbances and the like. These disorders often involve irrational or inappropriate thought or behavior as well as psychological distress or discomfort (anxiety). Cognitive, emotional and behavioral outcomes like these can impede in varying degrees the person's ability to function in what might be considered, for that person, routine personal and social activities. (Any handbook or introductory text in psychiatry can be consulted for more comprehensive classifications and discussions of psychiatric disorders. For example, see Kaplan, Freedman and Sadock, 1980; McHue and Slavney, 1983). Each pathological posture exhibits its distinctive causal and developmental path which, in conjunction with special constellations

of external factors and contingencies, can result in varying degrees of violent behavior.

We should point out that psychiatric hypotheses of violence do not argue that mental malfunctions necessarily or even usually entail such extreme behavioral components. (Psychopathology most likely accounts for a small portion of all violence although no firm evidence currently exists in this regard.) Psychiatry does propose, however, that some portion of violent conduct is related to psychopathology and that certain kinds of violence are more likely to be so related than are others. (For example, certain kinds of brutal homicides or sexual offenses may involve a disproportionately large number of psychopathological individuals) A recent report by the U.S. Presidential Commission on Mental Health (1978) concluded in its overview of violence that although some mentally ill people are violent, the image of the mentally ill person as violent is incorrect (p. 56).

Psychoanalysis is perhaps the most widely and popularly known psychiatric approach. The theory postulates that all psychological and behavioral activity is motivated to reach some goal and that the nature of the motivation may be either consciously or unconsciously known to the person. These goals stem from three internal (organic or psychological) sources: innate drives ("instincts") such as sex and aggression ("id" functions); rational considerations of self-interest and self-preservation based upon the recognition of internal and external limitations, prohibitions, opportunities, dangers and the like ("ego" functions); and moral restrictions instilled through social contacts and affiliations ("super-ego" and "conscience" functions).

Psychoanalysis interprets the origin and development of aggression and violence from several angles, depending upon the dynamic interplay among the three internal sources of goals just mentioned. Because of the disruptive and destructive aspects of assaultive behavior, all societies have developed rules which prohibit or regulate the external expression of innate aggressive processes. (Most effective in this regard are those rules carried by societal members as part of their psychological repertoire.) When violence is initiated, the behavior is likely to comprise, then, a moral violation (unless exempted due to socially stipulated mitigations and the like.)

Viewed in this way, the innate drive propelling the individual toward aggressive conduct is realized as violent behavior because of an improper or defective moral education, (socialization). In short, the psychological balance of power between biological drives and moral considerations has evolved in such a way that a primary aggressive drive overpowers internal moral restrictions.

Depending upon the particulars of the case, the psychological processes leading to violent displays may be either normal or abnormal (psychopathological). From a psychoanalytical standpoint, the boundaries between psychologically healthy and unhealthy forms of violence depend crucially upon such factors as whether the individual is consciously aware and accepting of the character and intent of the behavior or whether these thought processes and motivations are mostly unconscious and cause anxiety, discomfort, psychological and behavioral impairment and associated complexes of irrational symptoms.

As psychoanalytic theory evolved, innate processes began to play a less central role in explanatory and interpretative contexts. The early emphasis on biology, and of rational and moral responses to it, was soon balanced against the rational and, somewhat less so, moral origins of psychological functions and behavior. (This new emphasis is known as "ego-psychology".) In addition to explaining violence as the overpowering expression of innate propulsions pitted against opposing moral forces, violence in its many guises became increasingly acknowledged as the resultant of both rational and moral influences, for clearly innate aggressive potentials can be channeled to promote both self-interest and moral concerns. (Instrumental violence, such as robbery or the use of force for purposes of monetary extortion, falls the former category. Assaults based on vengeance and retribution fall into the latter group.)

In addition to the psychiatric approaches, several psychological theories have been developed and applied to aggressive and violent behavior: frustration-aggression hypotheses, social learning theory, and more recently, stress formulations. According to the classical version of frustration-aggression theory, aggression (i.e., real or fantasized behavior that is intended to injure or destroy persons or objects to which it is directed) is always a consequence of frustration (i.e., the interruption of behavior organized to obtain some goal) (Berkowitz, 1962: 26, 28; Dollard *et al.*, 1939: 1). Some important features of frustration are that it can remain active (a driving force) over time resulting in delayed and potentially extreme aggressive displays (Dollard *et al.*, 1939: 31). Other factors affecting the level of aggression are the strength of the frustrated behavior and the degree of

interference with the goal-directed activity.

Several reservations have been raised about the theory, however. For example, it would appear that frustration does not always culminate in aggression and, further, that not all aggression is preceded by frustration (Berkowitz, 1962: 29-50; Megargee, 1969: 1059-1063). As a result of these and other objections, the theory was modified somewhat to state that frustration produces the instigation (drive or readiness) to engage in various types of responses, one of which may be aggression (Miller, 1941: 338).

An important modification and extension of the frustration-aggression thesis has been made by Berkowitz (1962) who hypothesized that frustration produces anger (i.e., the predisposition to initiate hostile behavior) which, in turn, may result in aggression. Whether aggression in fact occurs depends upon past experiences (learning), cognitive interpretation of the frustrating situation (e.g., is the frustration accidental or intentionally imposed?) and immediate situational factors (e.g., presence of weapons, bystanders, etc.) (pp. 32-36, 46). This posture represents an important conceptual shift, for it argues that factors other than frustration can influence the likelihood of aggressive and violent outcomes. Among these factors are social processes and determinants (pp. 301-327).

Perhaps the most influential contemporary psychological formulation of aggression is social learning or conditioning theory. (See, for example, Bandura, 1973; Bandura, 1979; and Bandura and Walters, 1959. Summaries of

Monahan and Splane, 1980; and Wolfgang and Ferracuti, 1982). Central to social learning theory is the thesis that much behavior, including violent forms, develops from the ongoing and sequential processes of social rewards and punishments that follow from the completion of behavior ("operant" or instrumental effects). Several other processes also operate, including (but not exhausted by) observational learning (the imitation by observation of previously unlearned behavior), disinhibition (the dissipation of internal prohibitions to engage in previously learned behaviors) and social facilitation (the activation by observation of previously learned behavior that has not been subjected to internal prohibitions).

Megargee (1969, 1982) has reviewed the research and theoretical literature on social learning and has shown its links to the broader conditioning or behavioristic learning perspective. Behaviorist formulations generally posit five interlocking processes which, depending upon their respective strengths and substance, may lead to aggression and violence. These dynamics include the instigation to aggression (the sum of all internal factors which motivate a person to commit an aggressive act), habit strength (learned preferences for using aggression based on past rewards for having done so), inhibition (the sum of all internal factors which motivate a person not to engage in aggressive conduct), stimulus factors (immediate situational influences which facilitate or impede aggression and violence) and response competition (patterns of nonaggressive and nonviolent behaviors which may be selected in place of the hostile forms). Violent activity is most likely to erupt when

instigations to aggression, aggressive habit strength and facilitating stimulus factors are more pronounced relative to inhibitions and nonviolent behavioral alternatives (competitors). (We should note that conditioning hypotheses distinguish between those processes and conditions under which violence is learned and those under which it is maintained, regulated and performed.)

One of the more recent psychological approaches to violence involves the idea of stress which has been defined as a state of substantial imbalance between environmental demands made upon a person and the capacity of the person to respond to these demands (McGrath, 1970: 17). Responses to correct the imbalance can be either adaptive or maladaptive. Violence is often maladaptive for it may not establish the desired equilibrium. Indeed, such behavior may create an even greater imbalance. Several important stressors (or "life events" as they are sometimes called) have been identified, including illness, difficulties at work, residential relocation, accidents, changes in employment, marital and educational statuses, and so on. Studies have shown that persons subjected to high stress may be more prone to engage in dangerous behavior. (Wolfgang *et al.*, 1983: 42-45). Family violence has also been consistently related to increased levels of stress.

In addition to the psychological theories just outlined, personality assessments have been used to identify persons who are prone to violence. The most frequently used assessment device is the Minnesota Multiphasic Personality Inventory (MMPI). This evaluation schedule has been used for example, to distinguish "undercontrolled" violent from "overcontrolled"

assaultive individuals (Megargee, 1966). The former personality type is characterized by a diminished capacity to contain or suppress aggression whereas the latter type is marked by an intense suppression of aggression which can result in occasional explosive violent displays. Work using other personality inventories has also been conducted. (See, for example, Eysenck, 1970.)

IV. SOCIOLOGICAL AND CULTURAL PERSPECTIVES

Over the last three decades, efforts to interpret and explain violence from a sociological standpoint have gained momentum, insight and influence. Sociological focal points have included the influences of socialization processes (collective teaching and learning of social rules), subcultural formation and maintenance (creation, dissemination and perpetuation of social rules in delimited populations), social structural effects (status and class position in the social hierarchy) and social interaction dynamics (situational actions and reactions based upon the mutual interpretations and expectations of social participants). Three major sociological approaches to the study of assaultive behavior will be treated here: subcultural perspectives, structural (strain) theories and interactionist (situational) hypotheses. (Socialization processes and related areas of study, such as child-rearing, are generally included in social learning perspectives. These were treated in the previous section.)

According to the subcultural approach, violence is commonly used in those segments of the population (culture) which are characterized by clusters of values, rules of conduct (norms) and attitudes which encourage or tolerate

assaultive behavior as the acceptable and often preferred means to resolve certain kinds of interpersonal disputes or to achieve or consolidate status (Wolfgang and Ferracuti, 1982). Socialization and continuing subcultural support for violence promote not only the utilization of such extreme and potentially lethal behavior but also reduce whatever guilt the individual might otherwise experience in the contemplation and performance of these activities. Firearms, knives and other technologies of violence, often available to subcultural members, both express and enhance the collective willingness and readiness to participate in assaultive conduct. In general, subcultural themes like that of violence develop and are transmitted from generation to generation among persons sharing a well-defined and delimited geographical or residential area.

Although confrontation and assault are permitted and expected within subcultures of violence, such activity is subject to rules and regulations which stipulate who may legitimately use violence, who may be the proper targets of violent acts, what nonviolent options exist, and so on. Violence is not, then, a part of all or even most interactions, nor is it likely to be used in equal proportions by all subcultural members. However, because the violence theme is pervasive and impelling, there is a widespread and high proclivity to invoke violent alternatives and solutions.

Other work in the area of subcultural analysis has focused on the disadvantaged social classes and on the formation of youth (primarily male) gangs in these populations. One version of this approach argues that violence and other deviant or illegal conduct may be promoted by typical structures of social relations in the lower classes, particularly by youthful

male groups (Miller, 1958). Disadvantaged social classes are characterized by widespread and persistent norms and values which highlight and encourage certain behavioral patterns such as toughness, getting into trouble and excitement. These values and norms (i.e., "focal concerns") are adopted by lower class youth from the parent lower class culture and, in turn, are accentuated and used as criteria for establishing status and group membership. Conformity to these norms, especially those encouraging toughness, often results in aggressive and violent attacks.

Another subcultural approach has focused on the lower class delinquent male group (Cohen, 1955). These youths, it has been suggested, have adopted middle class values such as striving for economic success and its exhibition in material consumption. However, because of the impoverished socialization patterns in lower class families, youngsters at these more depressed social levels are unable to compete successfully with their middle class counterparts. Frustration and anxiety result which culminate in a "reaction-formation" -- the forceful rejection and replacement of middle class values with values that are in opposition to those that have been rejected. Nonutilitarian (hedonistic), malicious and negativistic behavior are hallmarks of this subcultural inversion, with violence representing one of the more notable behavioral forms. (Other subcultural analyses have been conducted. One line of investigation has argued that violent and antisocial behaviors are a means by which adolescents prematurely and inappropriately strive for adult status. See Bloch and Nèderhoffer, 1957, 1958).

Structural (strain) theories postulate that diverse forms of unconventional behavior, such as violence, are generated by discontinuities between commonly

extolled and shared goals (e.g., the accumulation of wealth) and the socially approved means ("opportunities") that are available to reach these goals (Cloward and Ohlin, 1960; Merton, 1938). Limitations on legitimate means are most acute in the lower social classes, and it is at these points in the social structure that antisocial solutions to the problem of restricted conventional opportunities is most likely to occur. Lower class members, particularly the youth, tend to view these restrictions as unjust. Legitimacy is progressively withdrawn from those conventional norms which regulate the selection of goals and means. In their place, norms are adopted which encourage, approve or tolerate employing unconventional means to reach goals. One strategy for attaining goals, such as acquiring status among one's peers and associates, is the "conflict" solution: youngsters coalesce into groups and gangs in which violence becomes the favored behavioral technology by which to secure prestige, honor and other socially valued objectives (e.g., money).

Several researchers have suggested that some violent, antisocial and criminal activities are consequences of the perception of discrepancies between the level of goal attainment that people believe should be rightfully theirs and the level of attainment that they have actually reached (Davies, 1979; Ebert and Schwirian, 1968; Gurr, 1968; Toby, 1967). Monetary, educational, occupational and civil liberty goals have all been explored with this line of thought. Violent behavior is one means to redress what the individual considers to be illegitimate disparity ("relative deprivation"). Violence may be used as an acquisitive technique (e.g., robbery) or represent emotional discharges driven by the frustrations of deprivation.

Interactionist (situational) analyses, based mainly on work done in

social and environmental psychology, is concerned with the dynamic relationship between persons and between persons and their immediate physical setting (Magnusson, 1981; Monahan and Klassen, 1982; Moos, 1973). Central to this perspective is the idea that the immediate social and physical features of settings can have an important influence on the course and outcome of social interactions. These effects are broadly conceived as either facilitating or inhibiting violent and aggressive exchanges. Some of the more important situational features examined have been a reciprocal sequence of action and reaction by those who commit and those who are victims of violent acts (e.g., victim-initiated violence, intimidating behavior by the primary aggressor, victim resistance to intimidation and responses to the victim's resistance), the social relationship between the victim and the violent assailant (family members, friends, strangers, etc.), the presence of weapons and drugs, and the time and location of the incident.

Acknowledging the interactive character of violent episodes, situational approaches have been instrumental in stimulating research which focuses both on the victims of violence and, the more usual focus, those persons who have forcefully violated them. Victims do not always passively acquiesce to their aggressors. Indeed, they may even contribute to their violent demise, for example, through provoking behaviors on the part of their assailants which escalate into seriously violent attacks (von Hentig, 1973; Wolfgang, 1975). Some studies have suggested that victims of violent assaults may themselves become more prone to commit violent acts (Wolfgang, et al., 1983: 37-42). Social learning theory has much to say in this regard. (These and related areas of concern have spawned an extensive literature in victimology. See, for instance, Schneider [1982] for current international discussions.)

Considerations of situational characteristics have led to many important investigations and findings (Wolfgang et al., 1982: 31-37). For example, studies have shown that homicides and forcible rapes often involve persons who know one another, whereas robberies often involve strangers. Levels of injuries that a victim sustains are linked to the victim-offender relationship: victims of aggravated assault and robbery who know their assailants are more likely to sustain some form of physical injury. Also, findings indicate that resistance by victims of rape and robbery may reduce the likelihood that the episode will be completed. However, resistance functions counterproductively as well, for it may increase the level of injuries that are inflicted.

V. CONCLUSION

The diversity of perspectives and methods utilized in mounting the many analytical assaults on violent behavior have resulted in the rich and extensive knowledge treated here. Perhaps most striking about the results of these efforts, however, is the relative lack of interdisciplinary and integrative approaches: Theories and empirical findings within and across disciplines tend to be disconnected.

To check analytical discontinuity, communication and collaboration should be encouraged and underscored, for such exchanges can establish a common theoretical and research ground of interlocking propositions, hypotheses and empirical evidence. Emphasizing the need for interdisciplinary initiatives is not recent. (Wolfgang and Ferracuti, 1982: 1-13). Yet, the results of empirical eclecticism and theoretical pluralism have generally not found their way into integrative schemes. The future of integrative, interdisciplinary analyses of violent behavior lies ahead.

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