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ARI Research Note 87-55

AD-A186 919

EFFECT OF MARTIAL ARTS TRAINING ON
EXPRESSION AND CONTROL OF VIOLENCE

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U. S. Army

Research Institute for the Behavioral and Social Sciences

November 1987

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87 11 18 1987

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Research accomplished under contract
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER ARI Research Note 87-55	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Effect of Martial Arts Training on Expression and Control of Violence		5. TYPE OF REPORT & PERIOD COVERED Final Report August 85 - August 86
7. AUTHOR(s) Richard N. Carrera		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Department of Psychology University of Miami Coral Gables, Florida 33124		8. CONTRACT OR GRANT NUMBER(s) 9-X55-1106C-1
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, VA 22333-5600		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q161102B74F
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) --		12. REPORT DATE November 1987
		13. NUMBER OF PAGES 45
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) --		
18. SUPPLEMENTARY NOTES George H. Lawrence, contracting officer's representative		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Aggression Social Influence Social Psychology		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This literature review begins by describing sources of aggression as provided by laboratory, psychoanalytic, and sociobiological approaches. These sources include environmental events (laboratory approaches), the death instinct or Thanatos (psychoanalytic approaches), and learning rules that are ecologically evolved (sociobiological approaches). The paper then traces the development of martial arts in Asia and outlines psychological studies of martial arts that suggest that it would tend to increase violent (over)		

ARI RESEARCH NOTE 87-5520. ABSTRACT (continued)

tendencies. The paper concludes by reviewing a number of psychological factors that may serve as mediating mechanisms between the martial arts and the realistic control of violence. By including these factors, it is believed that a pattern of instruction can be embedded in a framework of martial arts training of sufficient intensity to take participants through the basic white belt level. The author concludes that such a program should have the effect of improving self esteem, self control, and general military effectiveness at both the unit level and for the individual soldier.

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Human history is largely a chronicle of large scale violence. Aggressive behavior at both an individual and group level is so widespread among humans that anthropologists have been able to identify only a minuscule number of societies which can be described as pacific or nearly so. Violence is ubiquitous, problematic and very expensive. It is doubtful that any developed culture could long survive without maintaining a well organized means of delivering coercive counter force against violence from within and without.

While the fact of violence is observed by all, its origins and even its definition are a matter of considerable debate. For some, the lesson of history appears to be that the disposition toward extreme forms of aggression is innate among humans as well as other species and well nigh ineradicable. For others, aggressive behavior is learned and it should be possible to arrange social contingencies which will eliminate or reduce its occurrence and prevent its development.

The first point of view tends to be held by those of a biological and/or Freudian persuasion while the latter position is more likely to be encountered among psychologists and other social scientists. There are, of course, many variations on both themes, several of which will be discussed below.

Common Forms of Aggression

Moyer (1976) has described six forms of aggression commonly seen in various animal species and which can be observed to varying degrees among humans.

- A. Predatory aggression is highly specific and usually associated with hunger. It is easily observed in members of the dog and

cat families and in a number of birds and fish. Among humans it is manifested in hunting and cannibalism and in the muggings and related crimes endemic to many urban areas.

- B. Intermale aggression is much more common than male aggression against females or aggression by females. The male sex hormone testosterone may be directly related to aggression. In humans, most intermale aggression is concerned with assertion of dominance.
- C. Sex-related aggression. The incidence of sex-related violence is difficult to estimate but it is clear that rape and sexual assault are widespread and that their incidence is increasing. For some offenders, aggression appear to be the primary or secondary motive and victims are typically assaulted or killed before, during, or after sex. For others, the motive appears to be primarily sexual including examples of sexual sadism.
- D. Fear-induced aggression may be readily observed in normally docile animals who are captured or cornered although the same animals might also cower, faint, or become cataleptic. There is anecdotal evidence that humans may respond in like manner, i.e., attack out of fear.
- E. Maternal aggression is very much in evidence among nonhuman mothers when their young are threatened. Human mothers do not appear to react instinctively in such situations but there is little doubt that they would become highly aggressive to prevent harm to their young just as most humans would fight to defend themselves or valued people or property. To the

above might be added all forms of defensive counterattacks as well as moralistic and disciplinary aggression used to enforce the rules of society.

The five categories so far described involve the direction of aggression toward specific people, animals, or objects under more or less clearly prescribed circumstances. They refer to violence of a readily understandable and relatively predictable nature, violence whose instigation can be reasonably attributed to stimuli outside the perpetrator.

To these, Moyer (1976) adds the category of Irritable Aggression which cuts across the others. It is not directed toward specific people and objects and occurs in circumstances of an unpredictable, seemingly random nature. The instigation is not readily discernible and appears to originate within the perpetrator as a response to major and minor frustrations or deprivations. Although humans are not among the most aggressive species they do manifest a much higher incidence of irritable aggression than lower animals and this fact accounts for the preeminence of violence in the lexicon of human problems. In its more extreme form, irritable aggression would be regarded as pathological by most mental health professionals. An alternative explanation, however, would view irritable aggression even in its most extreme and destructive manifestation in more rational terms as an indirect tool of interpersonal manipulation. As a heuristic device, it may be useful to examine the utility of uncontrolled, ferocious, unmerciful violence for influencing the behavior of others.

All violent outbursts tend to create fear and disorganized flight responses in any potential victims who might be present. Beyond that they are not very useful. In order for violence to be useful in controlling behavior it is necessary that the perpetrator be at least minimally identifiable and the violent behavior at least minimally predictable. There must be a discriminative stimulus. Under these conditions, potential victims will tend to be in a continual state of vigilance and responsive to any cues which would signal ways to avoid the violence. Being known as a violent individual is, therefore, a good way to get the attention of others - the more potential for uncontrolled violence, the more attention. Among potential victims, sensitivity to discriminative stimuli signaling violence has adaptive value. The utility of uncontrolled violence lies in its potential and not its actual destructiveness. Once acted out it is spent and the future effectiveness of its perpetrator is severely attenuated not only because of retaliatory consequences but also because the violence becomes better known, more predictable and therefore moves closer in nature to simple controlled force.

A good example may be drawn from the arena of professional football, a sport in which physical force is legitimate, desirable, and usually well controlled. The effectiveness of a football player, however, is clearly enhanced by the perception of other players that he will engage in uncontrolled violence, i.e., in violation of rules and carrying the risk of serious negative consequences. In a 1985 article in Psychology Today, Brenda Jo Bredemeir and David L. Shields discuss the subject of violence in professional sports. Ron Rivera, linebacker

for the Chicago Bears, is quoted as he describes himself in 1983. The off-field Ron, he said is soft spoken, considerate and friendly. When asked to describe the on-field Ron, he replied, "He's totally opposite from me. . . . He's a madman. . . . No matter what happens, he hits people. He's a guy with no regard for the human body." Elaborating further, Rivera revealed, "I'm mean and nasty then. . . . I'm so rotten, I have a total disregard for the guy I'm going to hit."

Rivera's reputation serves him well and his uncontrolled violence, when he gets away with it, serves to advance the cause of his team. If taken beyond a certain point, however, it becomes highly counterproductive in terms of negative consequences for him and his team. His effectiveness lies in his athletic capabilities including aggressive controlled force, plus his perceived potential for uncontrolled violence. Instances of such violence are useful mainly to maintain his reputation as a person who must be feared.

Similar examples may be observed in police work, warfare and many other areas.

If violence is viewed as a form of social influence, it quickly becomes obvious that what is effective is the threat of violence and that violent behavior, aside from its immediate consequences for the victims, accomplishes nothing other than enhancing the seriousness of the next threat. It calls attention to the perpetrator and increases his credibility. As credibility increases, further threats of violence become more effective and, if successful, increase credibility further. The optimum result in terms of power and influence accrue to him who is able to make credible threats without actually behaving violently and

risking destruction. He must be reliably perceived as being dependably unreliable. The most fearsome person is one who will commit violence without moral or rational restraint, a "mad dog killer." One who believably projects such an image possesses high social influence.

In discussing violent outbursts or uncontrolled violence it should be made clear that control refers to how far the perpetrator is willing to go and not to the skill or precision with which the violence is inflicted. The two aspects may well be inversely related at least in terms of fear and credibility. While it is true that a skilled fighter or a man with a weapon is highly credible in terms of capability the much more important factor in terms of fear induction is what he will do with that capability and the worst case is one involving a highly capable person who is also insane or otherwise unpredictable. Mental hospitals have traditionally been located in isolated areas. What is so frightening to many people about psychotics is the perception that they cannot be restrained by threats to their survival. This is only slightly less true in regard to the committed ideologue or terrorist. We call them fanatics.

Sources of Aggression

Laboratory Approaches

Experimental psychologists have devoted a great deal of energy to the laboratory study of aggressive behavior among humans usually in the form of electric shock delivered by one person to another. Much of this

work rests on the assumption that the causes of aggression reside in environmental events and not in internal dispositions (Sabini, 1978).

For this reason it is of limited relevance to a discussion of irritable aggression which may be presumed to have important individual antecedents. For many years following the classical study of Dollard et al. (1939) experimental psychologists believed that there was an invariant relationship between aggression and frustration. The work of Buss (1963, 1966), Gentry (1970), Baron (1977) and others have disproved that position though a revised version of the linkage continues to influence experimental psychologists (Siann, 1985).

Berkowitz (1972) suggests that violence is an expressive act which results from a combination of emotional arousal, aversive conditions and the presence of appropriate cues. A number of studies have demonstrated a relationship between aggressive behavior and physiological arousal associated with excessive heat, excessive noise, overcrowding and sexual stimulation (Bell & Baron, 1976; Geen & O'Neal, 1969; Donnerstein, Donnerstein, & Evans, 1975). This relationship, however, is not straightforward and varies with the attribution and personal interpretation placed upon various forms of arousal. Such attributions can, of course, vary widely and may even involve delusions which could predispose an individual to sudden outbursts of violence inexplicable to an outside observer. Other relevant attributions might involve the assignment of responsibility to external authority as in the Milgram (1974) experiments or the belief that one is not identifiable by others (Prentice-Dunn & Rogers, 1983).

The argument, like others in the history of psychology, comes full circle. While frustration in the form of aversive environmental conditions is clearly an important factor in aggressive behaviors, it is equally apparent that what is or is not "aversive" or "frustrating" is largely determined by personal interpretations.

In his synthesis of learning approaches to aggressive behavior, Baron (1977) makes the following recommendations for the prevention and control of human aggression.

1. Children should be exposed to as little aggression as possible whether in the media or real life.
2. Aggression and violence should not be rewarded in any way.
3. Conditions which provoke excessive arousal or suggestive situational cues should be eliminated.
4. Models should be provided who when provoked or aroused behave in non-aggressive ways.
5. Outlets should be provided which permit alternative outlets for arousal such as empathy, humor, and lust.

As Siann (1985) has observed in his extensive analysis these recommendations rest on the assumption that aggressive behavior is first and foremost, learned and that it has no positive aspects.

Psychoanalytic Approach

A very different and more widely held account of the basis for what Moyer calls irritable aggression is the psychoanalytic position. Freud's (1915) initial formulations about aggression stressed sadism, the enjoyment of the infliction of pain on another, and saw it as a derivative of erotic impulses. In later writings he began to regard

"aggressive inclination" as separate from sadism and as having positive value for physical survival. Finally, in response to the events of World War I. he postulated the existence of two basic instincts, the life force and sexual drive (Eros) and the striving for an inorganic state or the death instinct (Thanatos). In order to postpone the inevitable realization of the death instinct and to deflect impulses toward self destruction, aggression, which is regarded as inevitable in human nature, must be turned outward toward others.

According to Siann (1985) the psychoanalytic view of aggression is based upon three interlocking assumptions: 1) aggressive behavior derives from innate sources, 2) the manner in which an individual displays aggression in later life is dependent on his early emotional history, and 3) pathological aggression may derive from negative experiences in the handling of this aggressive drive.

Since the aggressive drive is innate and must be expressed in some form, aggressive behavior cannot be eliminated. Man must acknowledge and accept his aggressive tendencies and find ways to express them constructively. To fail to do so is to invite a build up of aggression which will result in a destructive manifestation directed either toward self or others.

The psychoanalyst Anthony Storr (1970) sees the aggressive drive as including, or at least coloring, a very large part of human behavior including the attainment of independence and achievement in all forms. By opposing to some extent the independence strivings of their children parents provide a foil which serves to stimulate the child's instinctive urge toward autonomy, self expression and ultimately all interpersonal

capabilities. When individuals are unable to come to terms with their own aggressive drive, the aggression assumes a pathological form in which it is turned against the self, projected onto others or expressed in explosive and childish forms, what Moyer has described as irritable aggression.

Storr, who has been influenced by Konrad Lorenz in addition to Freud, makes four recommendations for reducing hostility in man:

1. Encouragement of competition at all levels
2. Reduction of world populations through birth control
3. Reduction of projection through improved communications
4. Reduction of the scale of human institutions as a means of reducing individual feelings of impotence. The contrast with Baron's recommendations is striking. Storr seeks to manage aggression while Baron seeks to eliminate it.

The basic idea that aggressiveness is generated inside the organism in response to various events and that it is capable of quantitative accumulations with build up of pressure for release is not only central to psychoanalysis but is also commonly held by the general population as attested by expressions like "blow one's top" or "reach the end of one's rope." It is widely believed that people who live in frustrating circumstances need to let off steam occasionally lest the accumulation of pressure cause an explosion of violent behavior. Among professionals this is known as a "cathartic" theory of aggression. The safety valves are provided by competition, especially in sports through both direct and vicarious means, by all forms of indirect aggression directed at

people, animals and inordinate objects and in the psychotherapist's office by poundings administered to cushions, dummies, etc.

This formulation has great intuitive appeal and is apparently consistent with the subjective experience of so many individuals that it has become part of common wisdom.

The notion of affect storage was accepted in an uncritical fashion by Breuer and Frued and led to the formulations of "strangled affect" and "abreaction." In an original and interesting analysis written from a psychoanalytic point of view, Isaac (1984) characterizes as mythical the position that affects are stored under pressure and that they are dangerous and without constructive function.

To the contrary, he argues:

1. Affects are vital aspects of human functioning.
2. Affects are automatic subjective responses to internal and external events.
3. Affects serve the vital function of informing us of qualities of internal and external events.
4. Affects are transitory, and in their initial reactive form are impossible to store or accrue.
5. Because affects are transitory, their discharge is not mandatory and their expression is optimal.
6. The residual effects of affect experiences are the memories of those affective experiences stored as quiescent affective attitudes which (Alexander & Isaacs, 1963) in turn are psychologically vital aspects of personality as they become building blocks of personality and character.

What is different about Isaacs's formulation is the provision of a critical choice point between feeling and expression. This feature of his theory moves him closer to a cognitive point of view (Ellis, 1972; Beck, 1976) relative to the more common varieties of aggression described by Moyer (1976) in his first five categories.

It goes further, however, in providing an entirely reasonable explanation for the behavior which Moyer has termed "irritable aggression." From Isaacs's point of view, irritable aggression would be largely accounted for by belief in a cultural myth, to wit:

1. Affects can be dangerous.
2. Affects have no constructive function.
3. Affects, once evoked, remain in a kind of pressured storage until discharged; and therefore accrue increments to a point of maximal containment.
4. Affects while in storage become a source of damage to the person.
5. The necessary affect discharge must be accomplished very carefully so as to cause the least possible damage (Isaacs, 1984).

The experience of affects themselves, especially anger, are seen as both automatic and natural, consistent with a psychoanalytic view. The behavioral expression/inhibition of affect is seen as an attitudinal, ego controlled function.

This does not imply that people who inhibit irritable aggression engage in an internal discussion with themselves but simply that their behavior is determined by rational, strongly held attitudes. An

illustrative hypothetical example was provided to the writer many years ago by Dr. Albert Ellis. If in a crowded subway, someone comes down hard on our ingrown toenail, we will likely feel a surge of anger and a strong impulse to behave violently toward that person. As we lean toward that individual we suddenly notice that he is carrying a white cane and suddenly the whole situation changes - mediated by our belief that blind people are not to be held responsible for such incidents and, perhaps more importantly, that we do not have to retaliate in such a circumstance or in any other.

The perception of the white cane marks a critical choice point which determines the behavioral outcome.

As Isaacs (1984) points out, the belief that feelings, in this case anger, are stored until they are gotten out creates a powerful motive for expression and tends to forestall or short circuit the occurrence of the choice point. The result is a continual, eventually habitual obfuscation of the distinction between feeling and action and the development of what amounts to an irrational fear or phobia of affect.

The consequences of affect phobia can be extreme and may lead to serious psychopathology. Isaac (1984) provides an example of what he terms "potentiation." A person who believes in affect storage becomes annoyed by some minor frustration and then feels additional irritation because his store of anger has been increased (Now you have made me angry!) and this further increases the feeling of irritation and anger until, by the process of "potentiation" a violent rage is produced; what has been previously discussed as irritable aggression. The essential

element is the person's perception that he or she is undergoing an "unstoppable process which is likely to reach volcanic force" (p. 50).

Isaacs (1984) suggests that affect phobia has its origin during infancy when certain affects impel to action which are a threat to the maternal relationship and are therefore delayed and maintained in a state of uneasy restraint.

To this we might add the observation that it is very common in Western culture to perceive at least a moral equivalence between feelings and desires on the one hand and actions on the other. This may be seen very clearly in the wording of the ten commandments.

Phobia can develop to any affect but the most problematic is anger. The need to constantly monitor one's affective state can deplete energy, interfere with cognitive processes and lower resistance to stress.

From a psychoanalytic view, the answer is acceptance of affects, specifically, suggests Isaac, as sensory indicators of the qualities of internal and external events (1984). Erroneous approaches would include medications (anaesthesia) and methods which portray affects as dangerous such as substitute action (catharsis) and desensitization. The goal is to achieve a state of comfort with one's affect life thus eliminating the need for repression and other avoidant maneuvers.

Sociobiological Approach

The "drive-discharge" model of aggression created by Freud and Konrad Lorenz as well as the social learning approaches favored by social scientists are both rejected by the sociobiologists. In "On Human Nature," Edward O. Wilson argues that human aggression "cannot be explained as either a dark-angelic flow or a bestial instinct. Nor is

it the pathological symptom of upbringing in a cruel environment. Human beings are strongly predisposed to respond with unreasoning hatred to external threats and to escalate their hostility sufficiently to overwhelm the source of the threat by a respectably wide margin of safety. Our brain does appear to be programmed to the following extent: we are inclined to partition other people into friends and aliens, in the same sense that birds are inclined to learn territorial songs and to navigate by the polar constellations. We tend to fear deeply the action of strangers and to solve conflict by aggression. These learning rules are most likely to have evolved during the past hundreds of thousands of years of human evolution and thus, to have conferred a biological advantage on those who conformed to them with the greatest fidelity" (1978, p. 119).

Wilson does not deny the role of social learning and culture in behavior at the individual level. The cultures which influence and shape individuals, however, are themselves the product of evolution. Cultural forms emerge as adaptations to changes in the environment. The predisposition to aggression is genetically programmed and aggressive behavior is adaptive. Violence, therefore, is to be regarded as natural.

In an interesting metaphor, Wilson suggests that human aggression is most accurately compared "not to a fluid that continuously builds pressure against the wall of its containers, nor a set of active ingredients poured into an empty vessel, but to a pre-existing mix of chemicals ready to be transformed by specific catalysts that are added, heated, and stirred at some later time. The products of this neural

chemistry are aggressive responses that are distinctively human" (1978, p. 106).

Thus, Wilson rejects the "storage" concept as it applies to aggressive behavior and not just to affects and in fact does not appear to make a distinction between them. In that sense, he follows the common wisdom. Since violence is natural it is adaptive and at least in some circumstances, legitimate.

Phenomenology of Violence

"Myself and my fellow prisoners lived a hard code, but it was of survival. Survival of dignity and sanity. If we didn't, we would be broken completely.

The only thing a convict respects in another is moral strength. That is all it takes to kill a man. . . . But in prison there are many broken men. . . . There are the ones so demeaned and broken by the violence of things, there is nothing they won't do short of any act involving violence. If they were unafraid of violence, they would not have lost their humanity" (p. 80).

The above passage is taken from In the Belly of the Beast: Letters from Prison by Jack Henry Abbott (1981), a chronicle of prison life made remarkable by its dark, compelling portrayal of violent terror as well as by its literary merit. Abbott describes the plight of men in extremis who struggle to maintain integrity in a setting where physical survival is constantly threatened and who can do so only through a readiness to commit lethal violence. For them, the continual inner

struggle is with their own passivity which ever threatens to transform them into non-entities, men who will dumbly follow even the instructions of their own killers. Personhood is maintained by acquisition of the capacity to kill and, most of all, by making that fact known.

Toch (1972) conducted extensive peer interviews with prisoners, former prisoners, and policemen who had histories of violent behavior with a focus on their subjective experience. After extensive analyses, he concluded that violence prone people hold one of two basic orientations which are expressed as interpersonal strategies. The first of these orientations is based on feelings of impotence, inadequacy and vulnerability to control by others. It leads, suggests Toch, to the following types of violent behavior:

1. Reputation defending: when violence is used in order to preserve a role which 'has been allocated by public acclaim'.
2. Norm-enforcing: when violence is used because the individual believes that he is acting to enforce his own values.
3. Self-image compensation: when violence is used to compensate for low self-esteem. For example, (a) as a form of retribution against people who have cast aspersions against the particular individual; or (b) when violence is used to gain admiration.
4. Self-defining: when violence is used to preserve the individual from physical harm.
5. Pressure removing: when the individual tends to deal with a social situation by using violence because his social skills are limited.

The second orientation is one in which the violent individual perceives others as objects or instruments for serving his own needs. This leads, according to Toch, to the following types of violent behavior:

1. Bullying: when pleasure is obtained by terrorizing individuals who are particularly susceptible.
2. Exploitation: when violence is used to manipulate others into 'being tools of one's own pleasure and convenience'.
3. Self-indulging: when violence is used because the individual believes that others exist solely to gratify the individuals' own needs.
4. Catharting: when violence is used to give vent to emotions or moods.

All of the above behaviors are most likely when the social situation is perceived as threatening. All of them involve in one way or another the assertion of dominance and therefore fall into Moyer's category of intermale aggression (1976). Clearly, however, they have the capacity for facilitating increasing amounts of irritable aggression since these patterns are habit forming, i.e., they occur with increased frequency and consistency to decreasing amounts of stimulations. Toch sees violent behavior as originating in early interpersonal relationships which produce an inadequate and unstable self image in which people feel vulnerable to manipulations. He sees consistent patterns of violent behaviors as an attempt by the perpetrators to find consistency of self at the expense of their victims (Toch, 1972).

The topic of selfhood is a recurring theme in psychologically oriented discussions of violence. In a characteristically insightful analysis, Rollo May (1972) portrays violence as the explosive expression of impotence, low self-esteem and insignificance. It is the ultimate exit. The conscious potential for violence, says May, is an element essential to full humanity (p. 97). To deny or repress the capacity for violence is to create impotence and therefore the probability of violent behavior. The person least likely to commit uncontrolled violence is well integrated and undeluded. In acknowledging his own violent potential and physical capability for such action he becomes maximally able to meaningfully renounce it. In doing so he amplifies his capacity for love and intimacy.

May appears to be saying that the renunciation or control of violence can have meaning only for one who acknowledges, accepts and even embraces his own capability and potential for violence, a position consistent with a cathartic theory of emotion and a more generally Freudian perspective.

The Martial Arts

In the most general sense, "martial arts" refers to specialized methods or techniques of armed and unarmed combat which no doubt appeared very early in human history. Its usage here will be restricted to those practices which had their origin in India and China and found their highest degree of systematic perfection in feudal Japan. It is further restricted to the techniques and attendant attitudes relating to

confrontation between two or a few men as opposed to the tactics of larger military units.

The individual Japanese fighting man now and in the past is conceded to be one of the best the world has produced (Brinkley, 1902, Ratti & Westbrook, 1973) and it could hardly have been otherwise. For centuries and especially during the Tokugawa period, the military class was so absolutely predominant in Japan that the values of the warrior can be said to have been those of Japanese culture.

For this reason, the saturation of feudal Japan by the warrior ethic is well documented, even in Western languages. For the balance of this discussion, the writer will lean heavily on the definitive work by Ratti and Westbrook (1973).

After 1600 A.D. the arts of individual combat proliferated in Japan while often being shrouded in secrecy. By the early 20th century, many forms had specialized to the point of isolation and passed into obscurity and extinction.

In a summary chart (p. 23) Ratti and Westbrook list 39 forms of armed bujutsu (martial arts) and 27 unarmed. These practices were extremely diverse in outward forms ranging from horsemanship to the art of the war fan. In spite of the diversity, however, they all shared factors of an inner, psychological or spiritual nature which, far more than outward behaviors, constitute the real essence of the martial arts and are the major focus of concern here.

Inner Factors

Throughout Asia the abstraction called Ki is one of the two conceptual formulations of the theory and practice of the martial arts.

The references to Ki are ubiquitous but the definitions, at least to the Western mind, are somewhat vague. Ki is coordinated energy. It is of an intrinsic, inner nature as opposed to the external energy generated by powerful muscles. It is an energy which enables seemingly incredible feats of strength, movement, perception and concentration. A warrior advances in his art as he becomes increasingly capable of generating Ki and it is this energy which makes it possible for some of them to remain very formidable fighters at an advanced age. The coordination of Ki can develop beyond the level of individual capabilities so that it can be projected as a form of influence and even domination of other people. In the military it is manifested as leadership, the charismatic ability to move other people to believe and act in the fulfillment of a collective mission. Ki is not normally possessed by many individuals and can be developed and mobilized only after long and disciplined practice especially of zazen or zen meditation.

The Hara or center is the other major conceptual foundation of the martial arts and is even more abstruse than that of Ki. The theory of center begins with the observation of man's chaotic reality, his confusions, his sorrows (Ratti & Westbrook, 1973). These are attributed to his ignorance and impaired perceptions which make him easy prey for enslavement to the pursuit of illusory goals like prestige, power, violence, material possessions etc. The redemption of this unfortunately natural and usual condition is some form of enlightenment, a state of extreme clarity of perception and intuition which will lead to proper decision since to see clearly is to know what to do.

In order to emerge from the chaos, man must, like Archimedes, have a platform, a point of inner harmony, balance and stability of mental control from which to perceive and judge the inner and outer stimuli and circumstances which impinge constantly upon him and especially at those moments which may decide the outcome of a life or death encounter. This point was not lost on the martial arts instructors of Japan and almost to a man they taught that no method of combat had any real value unless it helped to develop hara.

The Japanese word hara means "belly" and the development of focal awareness and centralization in the lower abdomen is considered a powerful technique of mental integration. Of utmost importance is abdominal breathing. Trained martial artists typically breathe in the pit of their stomach as a matter of habit but there are also a variety of specific breathing exercises designed to increase abdominal focus, some of which produce unusual and intimidating sound effects. The hara is the point at which Ki enters the body and from which it is controlled. The two concepts are therefore intimately connected.

A more esoteric variation of the use of Ki regards the energy as an "imaginary intellectual fist" thereby ascribing to it a specifically mental nature and cognitive control although the source of Ki is still seen as coming from the hara (Rotti & Westbrook, 1973). This school known as hsing-i has a surprisingly modern ring since it anticipated the contemporary use of mental imagery in clinical psychology and especially in applications for improving performance in competitive sports. Its use in the martial arts might, for example, appear as follows. A martial artist might create a mental image of strong tubes leading from

his abdominal center upward through his torso and arm to his fists. At the moment of impact he momentarily tenses his abdominal muscles and visualizes Ki emerging from his knuckles. The result is a focused strike of devastating power.

The basic idea was to fuse all the inner capacities of perception, motivation, thought, concentration and decision with the external power of strong muscles, skillful techniques and weapons so that all is focused at the point of control.

Bushido

The traditional Japanese warrior went to great lengths to prepare himself to explode into action without the slightest hesitation and above all, to do so with no thought to the appropriateness or morality of his behavior. Fundamental to his code of conduct (Bushido) was never to ponder the nature, significance, and effects of a superior's command, but to commit himself totally to the attack without regard to his own survival. If anything distinguishes the samurai from his military counterparts in other nations it is the extent to which he overcame the fear of death. For centuries, he was trained to believe that his life was not his own and from childhood was systematically exposed to all manner of conditioning designed to inure him to the natural fear of death as well as physical pain and suffering, culminating in his readiness to commit ritual suicide. It is primarily his attitude toward death which has traditionally made the Japanese soldier such a fearsome warrior. It is an attitude which extends not only to his own personal fate but to the inflicting of death upon others - the martial business.

The Japanese military has not encountered a curious psychological problem which has been endemic to Western armies since the introduction of firearms, i.e., the inability or unwillingness to shoot (Marshall, 1947). Firearms, of course, are highly impersonal compared to older weapons and lend themselves to dissimulation of combat activity and the distancing of self from individual responsibility for killing. After the battle of Gettysburg over 18,000 muskets were found on the battlefield which had not been fired (Karsten, 1978). Similar incidents have been frequent occurrences in military history.

It is of interest to note that the Japanese seem to have had a particular aversion to the military use of firearms and in fact outlawed them in the 17th century and reverted to the use of swords and spears for a period of 50 years (Perrin, 1979).

Many of the attributes of traditional Japanese culture: the tendency toward action as opposed to contemplation; stoicism in the face of pain; physical and mental discipline; respect for authority; the emphasis on perceptual alertness and inner calm, find expression in the values held by contemporary practitioners of the marital arts.

Many observers have been impressed by what they perceive as the combination of lethal potential with peaceful inner strength and sometimes moral sensitivity to be found in adepts. The question of inner motivation always comes up. It is, says Hiroshi Hamada, Karate sensei at Old Dominion University in Virginia, ". . . like a Zen riddle: It cannot be answered until there is no longer any reason to ask it."

Newspaperman Denis Collins, writing about the people who train with Hamada observes, "stand close enough to feel the energy that radiates

from 190 people tapping into their own electric current, look into eyes that reflect a calm most people achieve only in moments just before sleep and you might recognize something close to the human core, something as sweet and scary as the midnight sound of a God-blessed choir" (Collins, 1986).

Such hyperbole is not rare among lay observers of the marital arts scene.

Psychologists too have shown interest in the martial arts and in the special characteristics which might be possessed by those who practice them, especially characteristics which might be relevant to the management of violence prone people. A review of the psychological literature follows.

Psychological Studies

The work most directly relevant to the subject of the current paper is a 1981 study by T. A. Nosanchuk. This investigator studied the effects of traditional karate training on aggressive fantasy as measured by students' verbal responses to written hypothetical situations. Among 42 students (Karateka) at various belt levels it was found that longer training is associated with lower aggressiveness. Though this study does not address the problem of overt aggressive behavior it is of theoretical interest because its findings are consistent with a cathartic rather than a social learning interpretation of aggressive behavior. The latter point of view currently in vogue among many psychologists would predict that exposure to marital arts would tend to increase violent tendencies.

A number of studies of varying degrees of methodological adequacy, have attempted to describe personality characteristics of martial artists by comparing the responses of practitioners at different levels of expertise with each other and with nonpractitioners on various paper and pencil tests.

Rothpearl (1979) administered the IPAT Anxiety Scale Questionnaire and the Buss-Durkee Hostility Inventory to 152 students of classical karate. He found small but significant negative correlations between karate proficiency and both anxiety and Buss factors of hostility, irritability and suspicion. He also found that karate students, when compared to a control group, tended to favor indirect rather than assaultive expressions of hostility.

Using the Gough Adjective Check List, Duthie, Hope and Barker (1978) compared 100 average and 52 superior martial artists. A number of scale differences were found suggesting that the superior group were significantly more extroverted and ascendant than the average group who tended toward introversion and abasement.

Kroll and Carlson (1967) also studied karate practitioners at different levels but found no differences among them in response to the Cattell 16 PF Inventory. The combined groups, however, differed from participants in other sports. Compared to gymnasts, karate practitioners were more tense, conscientious and rule bound. Compared to football players and wrestlers they appeared more self-sufficient, reserved and detached. These findings suggest that they may be less affiliative and socially oriented and may reflect a more meditative introversive orientation.

In another study utilizing the Cattell 16 PF Inventory, Pyecha (1970) administered the instrument to a student population before and after 16 weeks of instruction in judo and compared them with control groups of students enrolled in volleyball, badminton, and basketball. Though the latter two groups showed no change at the end of the course, the judo group scored higher on the Cattell factor of Warmheartedness vs Reserved. The reasons for the latter finding are not clear.

In these studies utilizing both the Gough Adjective Check List and the Cattell 16 PF Inventory whatever differences obtained were between the skilled martial artists and beginners. There were very few indications of differences between the beginners and non-martial artists. The findings tend to support the interpretation that whatever is unusual about skilled martial artists results from their training rather than from selective factors.

Kodman (1982) compared the responses of black belt karate instructors to the California Personality Inventory (CPI) with those of high achieving and low achieving college students. The instructors' trait scores tended to fall between the two groups of students with none of the subjects exhibiting signs of severe pathology. In this study, karate instructors appear to be more alike than different from college students.

A somewhat unusual study was carried out in Naples, Italy by Saraceni and Montesarchio (1977). These investigators studied the psychosocial motives of thirty male karate students by obtaining measures of needs for Affiliation, Achievement and Power (McClelland, 1964). Scores were obtained under four conditions,

1) self-description, 2) ideal self-description, 3) self as authority figures would prefer, and 4) self as members of the opposite sex would prefer. The results indicated good self-esteem among the students in terms of self-ideal discrepancy as well as the perception that they were well regarded by authority figures including their teacher. This was not the case, however, in relation to females, whom the students perceived as undervaluing them on the three dimensions of Affiliation, Achievement, and Power. In order to clarify this interesting finding, Saraceni and Montesarchio obtained rating data from a group of thirty young women who had some familiarity with karate students along the same dimensions utilized earlier (Affiliation, Achievement, and Power) and in terms of actual vs ideal perceptions. There were no differences in the ideal ratings. The actual ratings likewise showed no differences relative to Achievement and Power but did reveal a highly significant difference in regard to Affiliation. The karate students are seen by the girls as less friendly and affectively available than boys in general. The authors speculate that karate students have or develop a fearful inability to relate to the opposite sex and that they therefore tend to withdraw from them to a position of cohesive, self-satisfied defense.

The data on personality characteristics of martial artists are sparse and based on a few correlational, descriptive studies. What is known may be summarized as follows: Martial artists are not characterized by significant psychopathology (Kodman, 1982). On the basis of paper and pencil tests they appear more alike than different from normal populations and whatever descriptive differences appear are

more characteristic of advanced practitioners than beginners. Some tendency has been noted for advanced practitioners to appear more ascendant and extroverted than beginners who appear to be somewhat less affiliative and socially skilled (Duthie, Hope, & Barker, 1978; Kroll & Carlson, 1967; Saraceni & Montesarchio, 1977). Training in the martial arts is associated with a tendency to inhibit the direct expression of aggressive fantasy and hostility.

The above findings must be regarded as very tentative. They are, however, suggestive of some preliminary hypotheses. It appears that beginning students of the martial arts, at least those who do not drop out in the earliest stages of training, may be somewhat rigid, introverted, shy and resentful individuals who do not perceive themselves in highly favorable terms. Their motivation to begin and to persist in this rigorous training may be to bolster self-esteem and feelings of well-being through personal self-improvement as well as identification with a highly visible and cohesive group possessing an almost mystical aura of quiet inner strength and elitism. Participation and advancement in the training enhances self-confidence and self-esteem thereby increasing sociability and diminishing tendencies toward hostility and aggression.

The social processes which might mediate these hypothesized changes are the subject of a study by Sylvia and Pinduz (1978). These investigations surveyed attitudes of sixty-three members of five American karate organizations in order to study the types of values internalized in karate schools, the role of leadership in norm

socialization in these schools, and the impact of hierarchy upon value internalization.

The values and norms predominating in this subject population included agreement with the following statements: 1) an insult that is not reacted to does no harm, 2) one is only justified in using one's art defensively, 3) the primary value of karate is self-mastery, and 4) karate training must emphasize the spiritual as well as the physical aspects of the art. The following statement was rejected: 1) winning isn't everything, it's the only thing. The values reflected in these responses clearly represent a process of socialization since 94% of the subjects indicated that their initial motive for studying karate was quite different, i.e., self-defense and/or physical fitness. All but seven of the subjects had response patterns significantly correlated with that of their instructors indicating the impact of the latter as primary socialization agents. It is of interest that there was no significant hierarchical effect, i.e., the similarity of attitudes between students and instructors did not vary with belt rank indicating that the attitude shift took place completely and early on in the training.

All of the material so far reviewed is concerned with attitudinal/personality variables shaped and molded in what seems a most pregnant and potent crucible for social learning with its tradition, ritual, physical discipline, rites of passage and rigid, clearly defined hierarchy of authority and status.

The almost exclusive research emphasis on psychological/social process is somewhat surprising in arts which are in a relative sense, so

asocial and so deeply immersed in both physical and mental discipline. One might expect that practitioners of the marital arts might differ from others along dimensions of a more narrowly cognitive and concretely physical nature.

Such a question was in fact addressed in a 1977 study by Hamano at the Notre Dame Seishin University in Japan.

This investigation found that advanced grade holders in karate were significantly more efficient in learning to detect interoceptive signals than subjects not trained in karate. Hamano attributes the result to the presumed superiority of karateka in ability to concentrate inwardly and suggests that such individuals might also be particularly able in terms of controlling or preprogramming their interoceptive state in a forward direction.

This study, though it has methodological problems, is of considerable relevance to the issue of violence because it suggests a means through which a person trained in the martial arts might be able to inhibit not only uncontrolled violence but also other responses, especially anxiety, which could interfere with the effective expression of controlled violence.

The Martial Arts and Morality

The overwhelming majority of masters, instructors, and others who write on the subject of marital arts explicitly take the position that their arts are associated with a non-violent attitude and most schools indoctrinate their students with slogans like "I will not engage in violent behavior" etc. A positive relationship between skill in the

martial arts and nonviolent attitudes and behaviors also tends to be supported by a number of the studies cited above.

Before proceeding to a discussion of the variables which could mediate such a relationship it is of interest to explore the philosophical underpinnings of the martial arts to see what sort of moral imperative they might bear with respect to restraints on the use of violence.

The word do is translated as way or doctrine. As such it indicates belief, motivation or an underlying value system rather than practice or techniques.

Almost every martial arts master who has written about his art has stressed that it is more than just a variety of practical and effective means of combat (Ratti & Westbrook, 1973). The art is seen as a vehicle for the development of the most important spiritual and psychological qualities, nothing less than the perfection of character. The martial arts are said to promote physical fitness, mental clarity, self knowledge, humility, a clear conscience and inner balance and tranquility (Funakoshi, 1973).

Of all the values held by these who currently practice the martial arts none is better articulated than that of a peaceful style of life manifested by respect for others, self discipline and avoidance of unnecessary conflict. It is believed by many that such ideals flow in a linear and consistent manner from the philosophical underpinning of the oriental doctrines of enlightenment, especially Buddhism. Such beliefs, however, may represent an over idealized view.

In a revealing analysis, Ratti and Westbrook point up the basic inconsistency between the highly humanitarian Buddhist doctrine of total and sovereign respect for life and the traditional military ethic of Japan which encouraged the taking of human life for trivial and even imagined reasons (1973, p. 447). There was clearly a bifurcation between moral and philosophical beliefs on the one hand and application on the other, a cleavage which historically can be observed in many other cultures and currently in the martial arts where it is the subject of much discussion.

The particular sect of Buddhism most associated with the martial arts is Zen, a school highly compatible with feudal Japanese character, one which seeks truth through meditation, concentration and other personal disciplines and not through intellectual construction or philosophizing. It is a system based more on intuition than reflection. It teaches that once a decision is made for whatever reason, that one should act forcefully without ever looking back and it makes no distinction between life and death. It is highly pragmatic and there is considerable debate about whether Zen imparts any ethical message at all.

Stocton (1958) summarizes:

Zen was popular with the samurai because it provided them with a discipline that made fighting endurable, and a few special psychological skills like how to shoot an arrow, or engage in hand to hand fighting with the best chance of success. There was a philosophy behind it, but it was the petty, blood-thirsty skill in front of it that was in demand (quoted by Rotti & Westbrook, 1973).

In regard to contemporary martial arts, Stocton's comments unquestionably apply to certain elements especially among those who espouse a nontraditional, technique oriented approach.

Rowdyism, street fighting and any sort of unnecessary violence is deplored in martial arts publications but it seems clear that those who wish to emphasize its pacific and civilizing implications will need to rest their case on more than references to Zen Buddhism.

In the following sections will be reviewed a number of psychological factors which may serve as useful mediating mechanisms between the martial arts and the realistic control of violence.

The Mediation of Violence

Discipline. The martial arts require a disciplined mastery of the body and of the mind and emotion as well. These factors of inner control and power are considered superordinate to weapons and techniques and are equally important in offense and defense. A particularly good example is the kiai, the use of the voice as a weapon to terrify and immobilize an opponent. In order to be at maximum advantage, the mind of a combatant must be free of extraneous thought and emotion. In classic stories of the marital arts a student is often rebuked by his sensei for becoming angry.

In a confrontation with a trained high level opponent, the skilled martial artist attempts to enter a state of complete peripheral awareness in which he can perceive even minute shifts in his opponent's breathing. If and when such a committment is made it signals a committment of Ki which immediately places the opponent at a disadvantage. The only defense against such a state of mind is said to

be a state of mondo or no mind which is at a point exactly midway between attack and defense and which, if properly maintained, emits no cues.

Such states of mind require enormous amounts of concentration and control. They are probably attainable to a high degree only under the condition of a life and death encounter. They require a commitment which necessarily permeates many or all aspects of an individual's life.

Obviously, such discipline is antithetical to the occurrence of "irritable aggression" or uncontrolled emotion of any sort.

Hypothesis: The trained martial artist is less reactive to emotions than non-martial artists and will manifest less irritable aggression.

Modelling

Baron (1977) and Bandura (1973) stress the importance of models in the expression and control of aggression. Exposure to aggressive models serve to increase such behavior in observers while exposure to non-aggressive models serve to strengthen people's inhibition and restraints against aggression and also serves to reduce the level of arousal in potentially explosive situations. Furthermore, such models provide instruction in nonviolent ways of handling potentially violent situations.

Martial artists may be expected to be particularly credible models of non-aggressive behavior due to their perceived capability for inflicting lethal violence.

Hypothesis: Martial artists are more effective models for facilitating either aggressive or non-aggressive behavior than nonmartial artists.

Self Concept

It is widely believed that violent behavior is facilitated by feelings of impotence and low self esteem. As a result of their physical capability and identification with a high status group, martial artists maintain high self esteem and do not feel a strong need to prove their worth or potency. Men usually fight because they feel weak and insecure.

Hypothesis: Martial artists have higher self esteem than non-martial artists and are therefore less likely to engage in violent behavior.

Social Perceptions

Martial artists, to the extent that they are recognizable, are feared by people in general and therefore do not receive as much provocation as others. They do not need to be violent.

Hypothesis: Martial artists are feared by non-martial artists.

Value System

Martial artists hold to a value system and explicit code of behavior which negatively sanctions needless aggression,

impulsiveness and pretentiousness while positively reinforcing personal dignity, self control, presence, personal development, courage, and stoicism.

Hypothesis: The values held by martial artists are not compatible with unnecessary violence.

Military Application

None of the mediators suggested above are incompatible with the use of controlled violence in a justifiable situation. People trained in the martial arts should make excellent professional soldiers and military leaders and should be outstanding role models for young recruits. The more relevant question, however, is whether the martial arts can be of value in the training of nonprofessional, i.e., civilian soldiers or conscripts. Such men form the bulk of most armies and are the least responsive to the demands of the army's mission which, simply stated, is to produce violence on demand. It is known that among riflemen only a minority fire their weapons in combat (Marshall, 1947). It is also known that many have committed gratuitous atrocities upon civilians (Padgett, 1972).

The material developed in this paper suggests a number of procedures which might be introduced into basic training programs on a trial basis for the purpose of improving the management of violence and discipline in general.

There should be an explicit portrayal of the ideal soldier and the code of combat which he is expected to internalize.

Prominent in this portrayal should be the picture of a fighting man who must be balanced physically, mentally, and emotionally.

Mental characteristics should be clearly spelled out with instruction in concentration, peripheral perception, memory, user of imagery, and self hypnosis.

Emotional control is critical. Recruits, especially, should be introduced to Isaacs (1984) concepts on how to handle strong emotion and

the benefits of doing so. There are many object lessons which can be utilized especially in basic training. It can be demonstrated, for example, that no matter what a drill instructor might do there is never an impulse to hit him which is irresistible. In addition, instruction should be given in the practical management of fear and pain and the efficient utilization of rest periods with particular attention to patterns of respiration.

This pattern of instruction should be embedded in a framework of martial arts training of sufficient intensity and training to take participants through the basic white belt level.

Such a program should have the effect of improving self esteem, self control, and general military effectiveness at both the unit level and for the individual soldier.

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