Introduction

Conceptual and definitional problems are often considered to be dull, boring and trivial. In fact, most such reading actually is dull and boring; yet, as far as ‘aggression’ and ‘violence’ (and a host of related terms: anger, hostility, destructiveness, etc. etc.) are concerned, the definitional problems are anything but trivial.

Ethologists, psychobiologists, sociobiologists, geneticists, psychopharmacologists, psychopathologists, neuropathologists, clinicians, psychiatrists, psychoanalysts, psychologists, sociologists, anthropologists, criminologists, political scientists and peace researchers, all have contributed some vision on the phenomena of aggression and/or violence. Considering their different and heterogeneous perspectives, disciplinarian traditions, paradigms, anthropological and ontological axioms, basic assumptions, etc., it is no wonder that confusion and controversy are rampant – students still muddling through the aggression quagmire, thrashing around in murky concepts and ill-defined terms – and theoretical positions seemingly irreconcilable: a trench warfare without progress on either side. Definitions of aggression reflect theoretical assumptions, while theories of (human) aggression inevitably imply paradigmatic presuppositions, anthropological axioms (in the sense of a ‘Menschbild’ or a view of ‘human nature’, embedded in a social cosmology or ‘Weltanschauung’ indicating man’s position among all other organisms and in the universe.

We shall not consider the use and definition of ‘aggression’ as used in international law (the aggression of nation X towards nation Y). This rather idiosyncratic use of the term, referring to offensive policies by nation-states, has deviated too much from the term as used in the social, behavioral or biological disciplines. The definition of ‘aggression’ in international law may be found in Röling (1975).

It is not unusual in the recent plethora of volumes and texts on the topic of aggression to encounter an initial statement that lists, in a rather awesome manner, recent statistics dealing with the rise of crime in the streets, the atrocities of war, the problems of brutalized children and related indices of social illness. Following this, the reader is often treated to a series of topics that deal variously with children that may (or may not) strike a Bobo doll, college students who attempt to electrically shock a colleague, restrained monkeys that vigorously bite a proximal rubber hose following electric tail shock, stickleback fish that attack a red oval object, rats that kill mice when housed with the latter over a 24-hour period, and so forth.

Such can be taken as suggestive of the apparent diversity of situations to which the term ‘aggression’ has been applied. In addition, some investigators may defend their findings (and paradigms) as more properly indicative of aggression than alternative approaches (Anderson & Lupo, 1976).
The term ‘aggression’ may be applied to a specific behavior such as killing. It can mean causing another injury or creating destruction, attacking another, or simply engaging in fighting. It can refer to strong, assertive behavior (an aggressive lover), to self-imposition or an offensive-besetting manner (an aggressive salesman), or a particular quality or style (an aggressive commercial, an aggressive driving style, an aggressive chess player). It can refer to a disposition (an aggressive personality) or an action. It may be used to refer to a host of emotional and attitudinal states such as anger, hate, hostility, etc. It may be conceived of as a personality trait, a learned habit, a stereotyped reflex, or an underlying biological process. It may refer to motivation or intention without regard to consequences, or to the consequences (e.g. injury) without regard to motivation. It can be self-assertive, or sado-masochistic. It can be instrumental or ritualistic, playful or spontaneous. It can be benign or malignant, positive or negative. In addition to all these, there is the usual dictionary definition which is concerned mainly with the moral justification or legitimation of an act (R.N. Johnson, 1972; Rummel, 1977).

Aggression has usually been viewed as a necessary adaptive device or an emergency mechanism; arguably, mankind could never have survived without aggression. In this very broad formulation, even an intellectual process can be ‘aggression’: if one endeavors to resolve a problem intellectually, one is perhaps seeking to alter one’s circumstances, to interfere with one’s environment, or indeed, an attempt to maintain one’s standing despite altered circumstances (Persson, 1980).

As the Encyclopedia of Psychology reports, “Controversy reigns in the study of human aggression”. A primary controversy involves various arguments about whether aggression is a drive, instinct or behavior, and if it is behavior, how it is learned or stimulated. Most basically, the conceptualizations of aggression grossly dichotomize into ideas defining aggression as instinct or drive and ideas defining aggression as behavior (Steadman, 1976).

Lion & Penna (1976) suggested that in the Western scientific tradition, we have been trained to divide human experience into internal, reportable, psychological processes and external, observable behavior. The insights regarding aggression obtained through psychoanalysis have been made through inference and through the studies of the internal and reportable processes of patients who describe angry thoughts, hostile feelings, or violent ideation. In contrast, other disciplines, such as criminology, anthropology and sociology have focused on the overt behaviors of aggression. Thus, two modes of looking at aggression have arisen, and a dichotomy has sprung up which perpetuates two literatures.

In some disciplines, there is general consensus that ‘aggression’ implies ‘approach behavior’, as the original Latin word ‘agredere’, and later ‘aggredere’ – advancing against – denotes. Lauretta Bender (1948), for example, refers to the original meaning of aggression as a tendency to go forward or approach an object. Allen (1948) describes it as the will to ensure and to test our capacity to deal with external forces; which may or may not involve hostility. For Lois Murphy (1963) aggression may range all the way from hostility to the vigour with which either constructive or destructive acts are carried out. This approach would make the term ‘aggression’ so broad as to include everything subsumed under what psychologists have called ‘activity drives’ (Klineberg, 1975).
Today many authors, especially in the USA, label virtually every vehement approach as ‘aggressive’, and the corresponding attitude is often positively valued in many social roles. Also many psychologists and psychoanalysts, including Freud, have emphasized the positive aspect of such aggressive behavior and the allegedly underlying attitudes and drives. Only in certain contexts or beyond a certain level of intensity aggression is labeled as bad, or is aggressiveness negatively valued. Just like a weed is only a plant on the wrong spot, aggression, in this conception, is viewed as bad only when performed in the wrong context. Such a conception sounds attractive, but it is difficult to apply in research because it is not sufficiently differentiated. What context is really the wrong one for aggressive behavior? Are there essential subcategories of approach behavior, the consequences of which may be destructive or self-destructive in a great many contexts, while other subcategories of approach behavior seldom or never have such damaging properties? And is there a kind of approach behavior without a single element of aggressiveness? According to Freud there is indeed none (Deutsch & Senghaas, 1971).

Some writers define ‘aggression’ so broadly that it nearly becomes synonymous with ‘assertiveness’ or ‘achievement seeking’ (Storr, 1968; Corning, 1971; Willhoite, 1971). Davies (1970) has argued that “Without the distinction between aggressive and assertive there is no difference between a man who shakes his fist at another and waves to him, between an assailant who stabs his victim and a surgeon who heals his patient. And there is no difference between the aggressive act of rape and the assertive act of love”.

The broader definitions of aggression have several disadvantages, according to Nelson (1974). First, they require the concept to do too much, to cover too many kinds of referents, and as a result they carry a lot of connotative ‘excess baggage’. Second, they prejudge empirical questions which demand data, rather than definitional fiats, for their resolution: for example, whether the sources of ‘aggression’ in the narrow sense (attack with injury or damage intended) can, if redirected, lead to achievement behavior, mastery of the environment, assertiveness and so on. Third, they are more prone to careless use and resultant confusion of cause and effect.

One of the most ‘sophisticated’ approaches to the concept of human aggression is Rummel’s (1977) ‘Social Field’ approach. His arguing is as follows.

To assault or attack does not necessarily mean to engage in physical or violent action, for we can cast an aggressive eye at a party, invade a person’s quiet, or attack another verbally without threatening or inflicting physical harm or injury. Social scientists tend to see aggression as murder, fighting, war, and hitting as the many possible kinds of violence and destructiveness. Equating such behavior with aggression misses the subjective nature of aggression and focuses on physical characteristics and apply only to some forms of aggression in some cultures. A raised eyebrow, a deliberately missed appointment, or a stare can be more aggressive in some cultures than a violent shove in others. Moreover, defining aggression by objective behavior (or a tendency toward such) ignores the two-sidedness of violence. One can beset another with violence, or violence can be used to defend oneself. Is the man who attacks and fights off a thug aggressive? Is the nation that defends its borders against invasion aggressive? Is a girl who kicks
a rapist in the groin aggressive? Of course not, yet, most definitions of aggression equate all acts of violence, defensive and otherwise. To be aggressive is to be offensive. No particular kind of behavior or power is meant. Aggression is a style. It can permeate all a person’s behavior, or it can color none.

With this understanding, Rummel then relates aggression to power in its various forms (Identive, assertive, forceful, coercive, bargaining, intellectual, authoritative, altruistic, manipulative), thus yielding nine types of aggression. Aggression seen in this light shows the simplicity of arguments that it is environmental, instinctual, or due to frustration. Multidimensional and multifold, tied to the various forms of power, aggression is a complex of different forms melded in a single act.

**Does aggression involve hostile injury or harm to another?**

Hostile injury or harm is neither a sufficient not necessary condition for aggression in Rummel’s terms. In defense against a mugger, for example, one may inflict hostile injury. Moreover, injury or harm may or may not be involved even in forceful or coercive aggression, as well as other forms of power. In other words, injury and violence may occur, but there is no synonymy between such occurrences and aggression. The focus in the literature on aggression as harm or injury (without considering whether it is defensive) is a focus on secondary and partial phenomena, like a study of the nature of an elephant that concentrates on the waves it makes in a pond.

**Does aggressiveness comprise hostility or anger toward another?**

Not necessarily. As a style of manifesting power, no particular emotion may be involved. Aggression may be instrumental. Again, it may be the one acting defensively, protecting himself or his values, who is hostile or angry. To be sure, assertive aggression can involve attacks on others manifesting paranoidal hostility. But this is not to say that aggression always comprises hostility.

**Is certain behavior aggression, such as physically attacking another, invading another’s territory, or assaulting another with a club?**

Not necessarily. What is offensive as apart from defensive or neutral behavior is culturally or situationally defined. Placing a man on a table and cutting him open with a knife may be surgery, religious sacrifice, a warrior rite, or torture.

Striking another with a club may be a sport, an attack or a defense. In some cultures merely crossing another man’s shadow is interpreted as an act of aggression on that person’s spirit. The ultimate aggression is presumed to be killing another, yet such activities as carrying the old to a secluded spot to die, infanticide and euthanasia have been culturally sanctioned as neutral behavior. Even within the same culture, there are different views of what constitutes killing.
Witness the debate over abortion, a practice that some feel is an act of aggression against a living fetus.

The focus on an objective behavior to define aggression is to commit the typical behavioral physicalistic fallacy. It is like equating love with kissing. It is not what is physical that counts to man, but rather the perspective through which he manifests reality, the meanings and values this reality has for him.

Is aggression, then, an intention to do harm?

Aggression can be intentional, but some acts occur unconsciously as in the identive aggression of a crying, kicking infant. Moreover, the intent to do harm can exist without the quality of being offensive, as in a police unit defending itself against a guerrilla attack.

In short, aggression as the offensive manifestation of power can be, but is not necessarily, instrumental nor intentional, and it may involve anger and hostility, injury and destructiveness, or certain acts or actions, although these might not be present. It is this subjective, multidimensional, multiform nature of manifest aggression that scientists and scholars have seen and defined differently. The latent definition underlying this variety, the core meaning in aggression, is as a vector of power toward offensive manifestation.

May (1972) also relates aggression and violence to power (or rather, in the case of violence, to a felt state of powerlessness). He distinguishes five levels of power: 1. the power to be; 2. the power of self-affirmation – not only to be but to be significant; 3. the power of self-assertion – “I demand that you notice me”; 4. aggression – taking some of the power of another for oneself; 5. violence largely physical because the other phases, which can involve reasoning and persuasion, have been ipso facto blocked off.

Thus, certain conceptions of aggression have related aggression to, or placed it in a broader context of (a) assertiveness (in which case aggression is not a priori negatively valued), and (b) power. Tedeschi, Smith & Brown (1974) have even argued that the term ‘aggression’ is inadequate for use in describing or classifying human behaviors. Instead they propose the concept of “coercive action in terms of threat and punishment” which provides a “more discriminating, denotative, and value-free language with which to construct a theory of harm-doing actions... If a person cannot persuade, bribe, manipulate, or otherwise induce a target individual to comply with the source’s wishes, and compliance is sufficiently important to the source, then the latter’s power may ultimately rest upon his ability to restrain, transport, immobilize, injure or destroy the target”.

Thus, these authors interpret ‘aggression’ in terms of ‘coercive power’. They distinguish 4 types of punishment: noxious stimulation, resource deprivation, deprivation of expected gain, social deprivation; together with 4 types of contingent threats, and 2 types of noncontingent threats.

Other definitions have related ‘aggression’ to (c) contest competition (e.g. Barash, 1977), and (d) inclusive fitness (e.g. Durham, 1976). (See Appendix 1: definitions of aggression).
‘Narrow’ Definitions of ‘Aggression’

According to Hartup & de Wit (1974), four main types of conceptualization have dominated the research and theoretical literature:

1) definitions which reference some salient topographical or sequential feature(s) of the response pattern;
2) definitions which refer to specific antecedents or eliciting conditions;
3) definitions which reference the consequences of the activity; and
4) ‘mixed’ definitions which reference two or more of the preceding elements.

Ad (1) The naturalistic observation of behavior by ethologists involves a functional analysis of particular classes of behavior, such as dispersive or defensive responses, and the conditions under which they emerge. In analyzing such naturally occurring behaviors according to function, ethologists have identified species-specific stereotyped response patterns which characterize the naturally occurring behavior of particular species. Often, the stereotyped dispersive or defensive classes of responding are characterized by identifiable topographies. Many laboratory researchers have adopted these characteristic intraspecific response topographies as their operational definitions of aggression (e.g. Scott & Fredericson, 1951; Ulrich & Azrin, 1962). By dealing with laboratory behavior that is isomorphic with ethologically defined aggressive or agonistic behaviors, these experimenters aligned their research with the naturally occurring phenomenon. The validity of the definitions of laboratory aggression is then assumed on the basis of parallel topography. This strategy seems reasonable only if the response topography is unique to an ethologically defined fighting response and not characteristic of other organism responses, and if it is not an epiphenomenon of some laboratory manipulation or stimulus condition (Knutson, 1973).

Topography plays a major role in the aggression definitions dealing with nonhuman aggression, e.g. McClearn & DeFries’ (1973) adoption of the Lagerspetz (1964) scale of mouse fighting makes considerable use of response topography. Similarly, Denenberg (1973) and Moyer (1968 et seq.) incorporate response topographies in definitions of aggression. As a rule, human-aggression research has not used response topography as an operational definition of aggression, although there are exceptions (e.g. Kelly & Hake, 1970; Peterson, 1970). There is little evidence to suggest that efforts to define human aggression in terms of characteristic response elements have been successful. In all likelihood, topographical efforts will produce payoff with respect to certain problems (e.g. the evolution of aggression) but not others (Hartup & de Wit, 1974).

To consider aggression to be noxious or painful stimulation does not involve a specific response topography, but is to adopt as the definition a salient characteristic considered ubiquitous in all aggression. Buss (1961), Baron (1971), Williams et al, (1967), among many others, have defined aggression as merely one subject presenting painful stimulation to another subject. This simple, unambiguous, operational definition of aggression has much to recommend it. Defining aggression as the presentation of aversive stimuli has had considerable support. Aversiveness
appears to be a characteristic of many of the stereotyped behaviors recorded by ethologists. It is not inconsistent with many topographical definitions and it does not have implications of intent. The aversiveness of stimuli can be independently assessed transsituationally, and this definition should be reasonably easy to specify in a laboratory (Knutson, 1973).

Ad (2) The presentation of aversive stimulation is a broad and widely used definition of aggression, but in most research situations embellishments have been added. For example, Buss (1961) chose to exclude from his definition both the accidental delivery of noxious stimulation and the administration of painful stimuli for socially acceptable reasons. While Buss explicitly argued against the use of intent in aggression definitions, his two exclusions certainly raise the question of intent (Knutson, 1973).

The antecedent most commonly employed in defining human aggression is ‘intentionality’. As Bandura & Walters (1963), among others, have pointed out: “The main problem... is that intentionality is not a property of behavior, but refers to antecedent conditions which frequently have to be inferred from the behavior of which they are supposedly an essential ‘ingredient’”. In addition, the practice of defining aggression in terms of intent (or any other antecedent condition) invests the concept with inordinate elasticity; the concept of aggression comes to subsume an extremely varied group of behavior patterns which have extremely varied effects upon the environment (Hartup & de Wit, 1974).

The intention of an organism can only be inferred from its behavior, either motor or verbal. Because of the influences of behaviorism and the predominant philosophy of science upon scientific psychology, inferences about a subject’s intent are usually eschewed. This is not true in aggression research. The issue of intent has been paramount – and not just in aggression research using human subjects. Consideration of an unobserved intentional inner state is reflected in many definitions of aggression. Reviewing the issues raised in defining the term, Kaufmann (1965; 1970) concluded that any time ‘aggression’ is used an inference regarding intent is implicitly made. While Kaufmann sees intent as implicit in any use of the word ‘aggression’, some writers have explicitly included intent in their definitions of aggression. Feshbach (1971), for example, distinguished between ‘instrumental’ and ‘hostile’ aggression on the basis of whether the aggressing organism engages in the behavior for an ultimate positive consequence or for the purpose of injuring the target. Other recent definitions of aggression (e.g. Daniels, Gilula & Ochberg, 1970) have also included a consideration of the intent of the attacking organism.

The distinction between hostile and instrumental aggression is far from clear (Buss, 1971; Feshbach, 1964; 1970; Bandura, 1973; Baron, 1977). First, as Feshbach (1970) has pointed out, both instrumental and hostile elements are often involved in the same interchange. Second, this distinction suggests that there is no ‘instrumental’ value to be found in hostile aggression, and yet the attempt to restore one’s self-esteem by making someone else feel bad is clearly instrumental behavior. Similarly, Bandura (1973) argued that, since in all instances the behavior is instrumental in producing certain desired outcomes, be they pain, status rewards, or material gain, it would be more accurate to designate aggressive behaviors in terms of their functional value rather than on the basis whether they are instrumental. Goldstein (1975) holds that
‘instrumental aggression’ contains both aggressive and nonaggressive components, since the act is designed both to injure another as well as to produce a desired end-state for the aggressor.

In response to such criticism, Zillmann (1978) has recently proposed that the term ‘hostile’ and ‘instrumental’ aggression be replaced by the more specific ‘annoyance-motivated’ and ‘incentive-motivated’ aggression. The first refers to aggressive actions undertaken primarily to terminate or reduce noxious conditions (e.g. intense anger, mistreatment at the hands of others) while the second refers to aggressive actions performed mainly to attain various extrinsic incentives. Laboratory studies of human aggression almost never establish the intentions of subjects, they often rationalize actions to subjects through ‘cover stories’ so that delivering shocks to others will be interpreted as beneficial to the victim or to science, and frequently involve neither harm doing nor intent to do harm. The general failure to articulate operational with conceptual definitions of aggression is quite obvious when perusing the research literature. Included among the dependent variables labeled as aggression are (a) delivering an electric shock to another person, as a ‘teaching tool’ (Baron, 1970), a rating device for evaluating essays written by others (Berkowitz & Geen, 1966), an inevitable and necessary part of the research procedure (Milgram, 1963), or concomitant with defensive avoidance on the part of the subject (Epstein & Taylor, 1967); (b) sitting upon or thumping a doll with a stick, paddle, or hand (Bandura, Ross & Ross, 1961); (c) choosing to play with a ball rather than a doll (Lövaas, 1961); (d) retention of aggressive content presented in a film (Maccoby & Wilson, 1957); (e) negative ratings of other persons on measures of perceived intelligence, attraction, and the like (Berkowitz & Rawlings, 1963; Miller & Bugelski, 1948); (f) writing themes to Thematic Apperception Test pictures which are coded for ‘hostility’ or ‘aggressiveness’ (Feshbach, 1955); (g) asking the experimenter to pop balloons with a needle (Mussen & Rutherford, 1961); and (h) tardiness to school (Eron, Walder & Lefkowitz, 1971). This semirandom list could be almost indefinitely extended. In none of the above experiments was any attempt made to establish intent to do harm by subjects (Tedeschi, Smith & Brown, 1974).

In the aggression-machine (BAM) procedure, a subject performs a task in which his response supposedly presents noxious noise or electric shock to another subject (a confederate of the experimenter). Rarely is aversive stimulation actually given, and rarely is the subject given feedback on the consequences of his responding. Since the subject neither actually presents noxious stimulation nor is given feedback on his behavior, it could be argued that this paradigm does not really meet the boundary conditions of aggression as the presentation of noxious stimulation (Knutson, 1973).

Furthermore, the ‘ecological’ or ‘isomorphic’ validity of these and similar experiments is very doubtful; in most laboratory experiments it is not even aggression in the vernacular sense that is being measured, but ‘retaliation’ (as a reaction to attack, or the feeling of being attacked) which is quite a different matter.

Some consideration should also be given to suggestions that behavior presented for socially acceptable reasons which results in painful stimulation should be excluded from a definition of aggression. As Buss (1971) points out, injurious attacks may not be considered aggressive if they occur in the context of a socially accepted role. A parent punishing his child usually has no aggressive motivation, nor does a teacher when he gives a bad grade. A judge regularly doles out
punishment to individuals, yet he is only fulfilling the requirements of his occupation. But it is
easy to see how just ‘doing your job’ or ‘carrying out orders’ can be distorted to sanction
brutality and violence. Evaluating the social context inevitably involves moral judgments, and
such subjective judgments may be crucial in interpreting an act as legitimate or illegitimate
(R.N.Johnson, 1972). Feshbach (1971) notes: “the moral evaluation of a violent act is a
function of the lawful status of the act, the extent of personal versus social motivation and the
degree of personal responsibility as reflected in the role of authority, the options available to the
individual, the defensive or initiated basis of the violence, the degree of emotional disturbance,
the amount of force employed, and the intentionality of the act. To these criteria must be added
normative considerations of fair play, the degree and manner of the violence, the age and sex of
the victim, and more generally, the appropriateness of the target. Last to be mentioned, but
probably most important, is one’s attitude toward the objectives of the violence”.

Recently, The Surgeon General’s Scientific Advisory Committee on Television and Social
Behavior (1972) noted the sociopolitical aspects of definitions of aggression. A scientific
analysis of behavior has to be apolitical and amoral. Operational definitions of aggressive
behavior must transcend political and moral criteria. That a political or social group chooses to
value particular behaviors or condemn particular behaviors should not determine the operational
adequacy of defining those behaviors as aggression, nor should that determine the essential
criterion validity of the definition. On commenting on the violent and aggressive behaviors
committed in support of noble causes, Bandura (1973) seems to provide considerable support for
this position. Other recent publications (e.g. Daniels, Gilula & Ochberg, 1970) have also
eliminated the distinction between socially acceptable and socially unacceptable aggressive
behaviors.

The frequency with which qualifiers have been added to the presentation-of-pain definition of
aggression accurately reflects the degree to which researchers often find this definition too broad
and nonspecific to be scientifically useful (Knutson, 1973). Qualifiers other than accidental
delivery and social desirability have been incorporated. The qualification of amplitude has often
been invoked, such that only a high-amplitude, painful stimulus or response is termed
aggressive. This tactic is frequently adopted in the aggression-machine literature (e.g. Baron,
1971; Buss, 1961; Williams et al., 1967).

Ad (3) While the “presentation of a painful stimulus” is probably one of the more widely used
definitions of aggression, another common strategy has been to label any behavior aggressive if
it has a consequence falling into a particular category. For example, Dollard et al. (1939)
considered aggression to be behavior that results in injury. The Surgeon General’s Committee
(1972) defined aggression as “the inflicting of harm, injury or discomfort on persons, or damage
to property”. Although closely related to the concept of presentation of aversive stimulation,
definitions of this type are based only on the consequences of the behavior. While concern might
be expressed that ‘consequence’ is just another word for ‘intent’, no intent is necessarily implied.
The consequence of a behavior may be as objectively specified as the behavior itself. Aggression
definitions based on specific consequences, rather than on broad, general effects, are closely
related to functional analyses of behavior and functional definitions of aggression consistent with
the naturalistic observations of ethologists. In much the same manner that ethologists note
classes of behavior in terms of their functional relationships to particular interorganism
consequences, Denenberg (1973) and McClearn & DeFries (1973) functionally define aggression in terms of consequences, such as dispersion or tissue damage. Obviously, flank wounds during mouse-mouse interactions, dead mice during rat-mouse interactions, or tissue damage in any interorganism situation are easily recorded and perhaps constitute reasonable definitions of aggression. Indeed, Denenberg suggests that operational definitions based on natural consequences of behavior have a very high probability of criterion validity. The tissue-damage definition has much to recommend it, but it also poses serious problems for laboratory research. While it seems obvious that tissue damage may not be the definition of choice in laboratories investigating human interactions, it is also problematic in nonhuman research. Most of the intraspecific behaviors described as agonistic or aggressive rarely result in tissue damage. Consequently, tissue damage as a consequence is too narrow and restrictive for use as the only definition of aggression (Knutson, 1973).

Hartup & de Wit (1974) think that attempts to define aggression in terms of a consequence such as ‘harm’ or ‘injury’ present the same difficulties as attempts to define aggression in terms of antecedent conditions – the concept becomes extremely inclusive. Accidental and pro-social aggression becomes subsumed by the concept as well as purposive, hostile activity.

Ad (4) Moyer (1968 et seq.) has presented one classificatory list based on the assumption that specific forms of animal aggression have both particular outcomes and are elicited under particular circumstances. Indeed, for many species, it is possible to delineate unique combinations of the eliciting conditions and the response consequence which are controlled by circumstance that they appear to constitute functionally distinct classes of behavior. Moyer’s list of aggression response-types includes predatory, intermale, fear-induced, maternal, sex-related, irritable and instrumental aggression, with instrumental aggression being distinguished from the others because of the role played by learning in its development. On the basis of comparable criteria, Wilson (1975) distinguishes territorial, dominance, sexual, parental disciplinary, weaning, moralistic, predatory, and antipredatory aggression.

There is reason to argue that there are ‘kinds’ of human aggression just as there are ‘kinds’ of aggression in other species (Hartup & de Wit, 1974). Similarly, R.N. Johnson (1972) has argued that “the real task is not to frame some pithy definition of aggression, but to understand the dynamics of aggressive behavior. The fact that the term is so difficult to define may not be because of a lack of intelligent thought, or of inadequacies in our language, but simply because it is not a simple, unitary concept and therefore cannot be defined as such”. Of course, as in everything else in aggressology, someone disagrees. Goldstein (1975) argues that “in the absence of any sufficient reason for parsing aggressive behavior, we ought to begin with the assumption that aggression is a uniform behavior; that the factors which underlie and determine one act of aggression are also those which determine other acts”.

Knutson (1973) summarized his criticism of operational definitions as follows: Ideally, the validity of a particular operational definition of an aggressive behavior would be established by an analysis of the behavior pattern under naturally occurring stimulus conditions. If a laboratory definition includes aspects of response topography, that topography should be demonstrated to be transsituationally isomorphic with the topography of the organism under natural situations appropriate for the emergence of that behavior pattern. An assessment of topographical
isomorphy obviously emphasizes species-specific definitions and militates against interspecies definitions. In addition to transsituational demonstrations of topographical isomorphy, transsituational demonstrations of the interorganism consequences of the response pattern are necessary for validation of the definition. It is the consequence of a behavior, together with the stimulus conditions under which it emerges, that distinguishes it among the kinds of aggression.

Broad definitions, such as the “presentation of aversive stimulation”, without additional delineation of stimulus conditions would not be appropriate to this strategy of formulating definitions. Similarly, concern for intent, social desirability, or accidental attack is unnecessary. Traditionally problematic aspects of the validity of aggression definitions, such as inanimate targets or property damage, can be easily considered as consequences of specific behaviors. Human verbal behavior can be treated as aggressive, providing the characteristics, stimulus conditions, and consequences are specified.

If aggressive behavior is defined in terms of anger and emotional involvement it has to be pointed out that many individuals get extremely angry without ever attacking or injuring anyone. Conversely, some individuals are capable of committing hideous brutality without any emotional involvement (R.N. Johnson, 1972). Anger and aggressive drive are often used synonymously, and clinical observation would indicate that they are intimately related. Feshbach (1971) suggests that this relationship is a highly probable one in the usual course of development, but it is not inevitable, and there are circumstances in which the anger response can be detached from the motivation to inflict injury. One can obtain satisfaction from the infliction of injury without being angry, and one can be angry without wishing to injure the provoking agent (cf. also Heller, 1979).

In summary, the following have been viewed as conditions that are necessary if a given behavior is to be labeled as aggressive: there must be (1) intention by the aggressor to do harm or injury; (2) execution of a particular act or response sequence; (3) harm or injury to the target; and (4) a socially significant target. While there is disagreement as to how necessary each of these ingredients are, the presence or absence of each has often provided controversy in attempts to label particular behaviors as aggressive. The most inclusive definition has been one that requires the presence of all four elements, namely intention, action, harm and a social target. Some, mostly of a biological persuasion, have apparently substituted for the ingredient of ‘intention’ the question of whether or not a given behavior serves a functional or evolutionary adaptive role for a given species in surmounting physical conflict (Eibl-Eibesfeldt, 1970; Lorenz, 1966; Scott, 1966; Southwick, 1969).

Less inclusive definitions have included three or fewer of these ingredients. For example, some have considered it sufficient to label an action as aggressive if harm was intended to a social target but no actual injury resulted. An assassin that fired a rifle and missed... is an example of this kind of definition. Other authors have focused more simply on the outcome of an action in order to determine whether it qualified as being aggressive, and have been unconcerned as to the possibility of intention or whether the target was a social one. Studies in which an organism bites a rubber hose to tail shock exemplify this definitional approach. Yet others have been concerned primarily with the specific topographical features of a response and the injury that is ‘triggered’
in the presence of certain features of the target object. Little concern is voiced for the intention of
the subject in such a definitional framework.

In spite of these many differences in usage of the term, there nonetheless are also some apparent
commonalities. First, all investigators seem to agree that some action or response sequence,
whether verbal or nonverbal, must occur as part of the condition(s) that define aggression. From
this, it can be seen that the ingredient of ‘intention-to-harm’ per se is not a sufficient (even
though many view it as a necessary) defining condition. Second, there appears to be no
definition of aggression that is couched solely in terms of the overt movements of an organism,
independent of whether intention or harm to a social or nonsocial target resulted from that
behavior (Anderson & Lupo, 1976).

These authors also argued that if it were possible empirically to show a relationship between the
aggressively labeled performance of college sophomores who electrically shock a colleague
when thwarted and the shock-induced hose biting of a monkey, then it would be scientifically
proper to apply the label ‘aggression’ to both paradigms, Knutson (1973) seems in agreement
with this analysis. Unfortunately, many scientists have not used the term in this manner. Instead
of relying upon empirically derived relationships, they have applied the term to a wide diversity
of situations on more exclusively, often unclearly articulated, rational bases (Anderson & Lupo,
1976).

Tedeschi, Smith & Brown (1974) have argued that as theorists have contemplated how they
would go about deciding when to label a response as aggressive, they have been implicitly
developing a theory of person perception. Cameron & Janky (1972) have been most clear about
the factors that would lead them to label behaviors as aggressive. They presented three specific
and necessary criteria for ‘correctly’ identifying aggressive behaviors. An aggressive act must
constrain the behaviors of, or restrict the outcomes for, another person; advance the selfish
interests of the actor; and the actor must be the instigator of the interaction. Two other factors
that may sometimes be important were also mentioned. Cultural conditions may be involved; an
act which is considered aggressive in one society may be considered quite appropriate and
non-aggressive in another. Furthermore, the status of the actor may temper the observer’s
judgment, so that a high-status actor may be evaluated as less aggressive than a low-status actor
when both engage in exactly the same actions.

Cameron & Janky argued that intent to do harm need not be involved in aggressive behaviors. If
an actor does harm and does so because of the pursuit of selfish interests, then he may be
considered aggressive, whether or not he intends to do harm.

This theory runs into the same problem as every other conception of aggression. It has trouble
handling the problem of accidents. Furthermore, the question is not whether the actor really has
the intent to do harm; rather, it is whether the observer believes the actor intends to do harm.

Whether an action will be labeled aggressive depends upon the perspective of the observer or
upon whose interests are being negatively affected. The actor may actually provide benefits for
another without thought of possible consequences to a third party. Yet the latter may interpret the
‘benevolent’ act as malevolent and aggressive.
It may be concluded that no action can be identified as aggressive or violent without taking into account the value system of the perceiver (Tedeschi, Smith & Brown, 1974).

In summary, the above considerations suggest that an act will be labeled as aggressive when the following conditions are met: (a) The action involves the constraint of another’s behavioral alternatives or outcomes (most clearly through the use of coercive power); (b) The observer perceives the action as intentionally detrimental to the interests of himself or the target person (i.e. malevolent or selfish), whether or not the actor really intended to do harm; and (c) the action is considered by the observer to be antinormative or illegitimate, for example, when the action is viewed as unprovoked, offensive, or disproportionate to the provocation. Brown & Tedeschi (1974) have obtained evidence in support of this attribution theory.

Similarly, Bandura (1973) who carefully analyzed the various factors that influence a person’s perception of injurious acts, arrived at the formula that “aggression is characterized as injurious and destructive behavior that is socially defined as aggressive” (cf. also de Ridder, 1980).

This amounts to saying, as Zillmann (1979) comments, that aggression is what people say is aggression. There are thus no definitional rules to follow but people to consult instead. In order to decide whether or not an injurious act is aggressive, the investigator has to sample people’s views of the act in question. Rather than eliminating the ambiguities and inconsistencies in common views of aggression, as other investigators have attempted to do in their definitional efforts, Bandura in fact uses these common views as the very basis of his conceptualization. Such a procedure may have great practical merit. It assures that by definition, the scientist’s view is no longer deviant from that of the layman, and since aggression concerns the lives of most laymen directly, the exchange of ideas and facts concerning aggression would seem to be greatly facilitated. From the standpoint of theory and research, however, the approach has severe drawbacks. Clearly, common views of aggression do not emerge as the result of people’s search for reliable classifications of phenomena. They are instead subject to numerous potentially distorting influences. In line with Bandura’s (e.g. 1973) view, they are acquired rather uncritically, and the acquisition is controlled by such processes as social learning (where the reinforcement contingencies involved generally apply to factors other than the adequacy of particular discriminations).

In general terms, common views of aggression, vague as they may be, are adopted and modified in many ways and for a variety of reasons. To the extent that these views change, any reliance on them amounts to the endorsement of a floating reference point. Many behaviors that were considered aggression a couple of years ago may now be designated differently, and vice versa. The changes in designation, then, would cause changes in aggression to be ascribed to unchanged situations, and they would generally distort any record of the development of human aggression. Comparisons of this type are more meaningful when a more stable reference point is used, such as that provided by definitions that specify criteria for behavioral characteristics of aggression.

The same assessment applies to comparisons between groups or individuals. Views of aggression are clearly different in different social groups within any complex society and between societies
(cf. Wolfgang & Ferracuti, 1967). Finally, the aggressor’s view of an injurious act need not be identical or even similar to the victim’s. A bystander may see the act in yet another way. A husband, for example, who makes a cynical comment about married life to his wife may feel that he is being hostile to her. The wife, on the other hand, may miss the intent and interpret the comment as a general statement. Conversely, the husband may make just such a general statement, and the wife may read hostile intent into it. The interpretation of a witness may fail to correspond to the view of either of the parties involved. If people’s views are to be consulted, an act’s designation as aggressive or hostile will thus greatly depend on who is being asked. All this, of course, is not to say that the views people have of the injurious acts they inflict, suffer, or witness are not of interest in the study of aggression. Obviously, these views constitute a person’s belief that he or she has aggressed or not, has been aggressed against or not, or has witnessed an aggressive or a nonaggressive act. These beliefs generally have definite behavioral implications, and they thus must be of great interest to anyone who attempts to explain behavior. However, a person’s beliefs about a particular incident should not be mistaken for an unbiased, highly specific, and accurate assessment of it. Beliefs are not valid merely by virtue of their existence. If, instead, a less personal assessment is pursued (one that meets the standards of behavioral research) beliefs concerning aggressive acts can be analyzed more meaningfully in that they can be related to potentially valid external criteria.

In summary, conceptualizations of aggression that are based on social judgment necessarily involve distorting factors (e.g. ethical considerations) and constitute unstable reference points; conceptualizations that are based on specified characteristics to be judged following methodologically sound observational procedures define a comparatively stable reference point to which personal assessments can be compared. Only the latter type of conceptualization permits the investigator to trace changing views of aggression and changes in manifestations of aggression itself. Similarly, only this type permits the meaningful assessment of any existing differences between views and manifestations of aggression (Zillmann, 1979).

**The Concept of Aggression in the Theories of Aggression**

As the main theories of aggression we shall consider (a) ethological theories; (b) psychoanalytic-psychotherapeutic theories (a complex heterogeneous set); (c) Frustration-Aggression (F-A) theory and its canonical modifications; (d) Social Learning theory; (e) Cultural Learning theory; and (f) Self-esteem (Self-consistency) theories.

We shall not elaborate the theoretical positions (this has been done elsewhere, see: van der Dennen, 1978), except that for the purpose of illuminating ‘aggression’ as conceived of by these theories, they will be very briefly summarized.

The theories of aggression epitomized:

(a) Ethological theories of aggression
Lorenzian ethological theory can be reduced to four propositions: (1) Aggression is adaptive in population dispersion, sexual rivalry, and social organization; (2) Aggressive behaviors are instinctive coordinations of threatening or fighting that have become ritualized to minimize injury and death; (3) Aggressive acts are caused by the buildup of aggressive motivation, which can be satisfied only by aggressive behavior; (4) Appeasement rituals evolve to inhibit aggression (Schuster, 1978).

According to the German ethological school (Lorenz, Leyhausen, Eibl-Eibesfeldt) aggression is a genuine instinct, as well as fear or anguish (‘Angst’). They only make sense together (Leyhausen, 1967). In everyday life we ‘spend’ our aggression (‘Kampfantriebe’) and fear ‘in small coins’, via rather innocent outlets. That is, aggression is virtually never so pent up as to need paroxysmal or cataclysmic outbursts (through the combined and concerted consequences of ritualization, the abundance of micro-conflicts, minor irritations, redirections, impositions, verbal aggression, humor and sarcasm, and its admixture in all kinds of behavioral modalities, e.g. the sexual). Furthermore, the ‘Kampfantriebe’ are not to be considered as isolated drives; they are embedded within the total system of drives and thus subject to the inhibiting or facilitating influences of many other drives. Virtually every observable act or sequence of behavior is to be understood as a ‘compromise’ resulting from the interacting participation of many single inhibiting, facilitating or differentiating drives.

The dynamic instinct conception of the German ethologists implies an endogenous, relatively autonomous, self-regulating energetic system of drives (‘Antriebe’) in temporal homeostasis. Inner rhythmicity and outer world are synchronized to a certain extent by means of IRMs (Innate Releasing Mechanisms) consisting of a receptor (sensory) component sensitized or tuned to certain releasing stimuli in the environment (‘Auslöser’, signal-, cue-, key-stimuli), constituting the ‘Umwelt’, and a releasing component, ‘eliciting’ or ‘activating’ (disinhibiting) the drive. In exceptional cases, the threshold lowering of eliciting stimuli can be said to sink to zero level, since under certain conditions the particular instinct movement can ‘explode’ without demonstrable external stimulation (‘Leerlauf’, vacuum-reaction).

Lorenz’s account of the proximate determination of aggressive behavior is based upon a formulation of motivation theory largely developed by him in the classical ethology of the 1930s. According to his famous ‘hydraulic model’ of instinctive behavior the performance of Fixed Action Patterns (FAPs), such as are shown in sexual behavior or feeding, depends upon the accumulation of energy specific to these activities in centers in the CNS. Release of this energy occurs when appropriate stimuli are provided, but in the absence of stimulation the energy must sooner or later find an outlet in relation to an inappropriate stimulus or even in vacuo. Lorenz has commonly used the apparent spontaneity of behavior under minimal stimulation as support for this view. However, the occurrence of aggressive behavior seems rarely to fit such an account even descriptively. Lorenz’s ideas were in large measure based upon Craig’s (1918) distinction between appetitive and consummatory phases of cyclic drives. According to Lorenz’s account the action-specific energy appears first as appetitive behavior and finds outlet in the performance of the consummatory act. In considering aggression Lorenz ignores, however, Craig’s (1918; 1928) further and more important distinction between ‘appetites’ and ‘aversions’. Aversive behavior is a response to undesirable or harmful stimulation and persists until the individual flees or until the stimulation is removed. Aggression, which Craig described as an ‘aversion’, occurs
in the social context only on the appearance of an offending individual and continues until one or other of the mutual offenders goes away. According to this account, aggressive behavior is nonrhythmic and lacks an appetitive phase (Crook, 1968).

(b) Psychoanalytic-psychotherapeutic theories of aggression

The first psychotherapist to propose an aggressive drive was Alfred Adler. In 1908 he published his theory that aggression is a superordinate drive that dominates motor behavior and consciousness and is a confluence of other drives. It is innate, the organizing principle of man’s activities, and can turn on the self, creating various pathological manifestations. Adler soon reinterpreted this drive as a masculine protest (a drive to compensate for feelings of inferiority), and finally as an upward striving for completion or perfection. In this later view, man was driven, above all else, to improve himself, to overcome. Aggression then became subordinate to this drive, and indeed, when directed at society, was a pathological form of striving (Ansbacher & Ansbacher, 1956; Rummel, 1977). Although eclipsed by the work of Freud and almost forgotten for decades, many of Adler’s views have been revived and transformed. One such transformation is manifested through existential psychotherapy, as in the work of Rollo May (1972). May considers power to be man’s basic drive and aggression as one form of this drive. Power has five ontological levels for May (see paragraph 1). Aggression is basic to man, but culturally formed. Not all bad, it is a way the individual affirms and asserts himself. It is manifested, for example, in initiating a relationship, in trying to penetrate another’s consciousness, in warding off threatening powers, and in love-making. “The truth is that practically everything we do is a mixture of positive and negative forms of aggression”. The expression of power in its aggressive, constructive forms is healthy. It is when such expression is inhibited or blocked that violence occurs. Violence expresses impotence (see also Hannah Arendt, 1969, who makes this one of her major observations).

The views of Adler and modern neo-Adlerians stand in marked contrast to psychoanalytic thought. Adler was a member of Freud’s psychoanalytic school when he proposed his aggressive drive in 1908. Freud initially rejected this view, believing that aggression did not constitute any special instinct or drive (Ansbacher & Ansbacher, 1956). It was not until more than a decade later that Freud, perhaps as a result of the bitter experiences of World War I and its aftermath, recognized an aggressive instinct. This he first elaborated in Beyond the Pleasure Principle, developing the concept in his later works. In Freud’s earlier theory, man was dominated by self-preservation and sexual instincts (the ego instincts and eros). Aggression had no status as a separate instinct but was a component of eros – an aspect of his sexuality. Moreover, eros was a tension-releasing instinct. As in the hydraulic model of aggression, man builds up internal tension that must be divested. Release (catharsis) constitutes pleasure. This was a mechanical conception, reflecting Freud’s early psychophysical and mechanistic perspective.

In moving to the fore the idea of a death instinct, Freud developed a particularly biological conception. All living things were now driven by two competing instincts. One was a life instinct (still eros) driving to create, maintain, and unify living things into larger systems. The death instinct drives toward breaking up living systems and dissolving them into quiescence. Being the
ultimate application of the pleasure principle, death is the divestiture of all tension, the perfect state (‘Nirwana-principle’).

The death instinct is directed inward toward extinguishing the organism. To preserve the organism, the libido does battle with the death instinct and directs it outward, whereupon it becomes external aggression, the drive for mastery, the will to power. Aggression is therefore secondary, a deflection of the death instinct away from the self. Moreover, in its battle with the libido, the death instinct may combine with eros into sadism or masochism, two of its worst common pathological manifestations.

To Freud, then, aggression was always negative or destructive. It was antilife or pathological. And behavior was a manifestation either of eros, of the desire for death, or of a combination of these. The striving for identity, for self-assertion, for social interest, had no role in Freud’s perspective (Rummel, 1977).

Few have accepted the idea of a death instinct, even though some of Freud’s successors, such as Melanie Klein (1950), have adopted and developed this view. The main argument and fundamental objection against the Freudian postulate of a death instinct (‘Todestrieb’, Thanatos, Destrudo, Mortido), and destructiveness as an externalization of this death wish) is its virtual non-existence in the animal kingdom. It might be conjectured that the death fantasies, death symbolisms, necrolatry and thanatic euphoria humans can indulge in, are a peculiarity of the species, an exclusively human ‘perversion’, insofar that virtually all human passions may acquire a lust component or develop ‘Eigenappetenz’.

Deutsch & Senghaas (1971) have given a new dimension to the concept of ‘Todestrieb’ in ego-psychological terms. In contrast to Freud, they view the ‘Todestrieb’ not as an innate disposition or drive but rather as a function of a system, more specifically, as a concomitant of systemic overload, the system being the ego as control and integration center. Thus the death wish belongs to the phenomena of regression connected with the loss of ego-performance, the disintegration of ego-control. It is a resignation in the same way as the exhausted victim of a blizzard finally lies down to sleep, never to wake up again. In fact they suggested to understand Freud’s concept of a death instinct as a metaphor for the failure of the ego’s mediatory capacity (Cf. also Menninger, 1954). In some modern ego-psychological approaches (Horn, Mitscherlich, Senghaas, Deutsch) an integral relationship between aggressive behavior and defective synthetic ego-capacity (at least restricted and limited symbolization and communicative competence) is postulated. The tendency to regard aggression (violence, punitivity) as media of communication is most probable in mentally deprived individuals (‘authoritarians’ are mentioned as most vulnerable); it is reinforced by means of compensatory affective cathection to collectivities and institutions and symbol clusters, and receives additional reinforcement from simplified cognitive structures. If a positive feedback process from the social environment in daily experience is established, aggressiveness and resort to violence become social and political categories. (For recent ego-psychological formulations, see Kutash, 1978).

A recent work on aggression by the psychoanalyst Fromm (1973) revises the notion of the death instinct in a direction consistent with current ethological findings and psychological research. Freud saw aggression as rooted in a death instinct, although its manifestations may blend with
eros. Fromm, however, recognizes two independent sources, only one of which is instinctual. Instinctual aggression is benign and defensive; uninstinctual aggression, rooted in man’s character, is malignant and destructive.

According to Fromm, man instinctually protects himself against threats to his survival, his freedom, and other basic values. Harm or destructiveness that results from this defense is unintended or purely instrumental. The aim is to overcome threat, the activity ends when the threat does. Thus benign aggression is reactive, not appetitive. It is aroused by stimuli, not internally generated by an increase in tension. In this Fromm’s instinctual aggression differs fundamentally from that of Lorenz and Freud.

Moreover, where human aggression for Lorenz and Freud is largely negative, hostile, and destructive, for Fromm instinctual aggression is positive, contributing to man’s growth, self-assertion, and independence, and to the survival of the species. Malignant aggression, however, results from specifically human passions seated in our character. Man’s organic needs and emotions are integrated and organized according to his major goals. This structure of organization is his character. It is a ‘human phenomenon’ enabling man to adapt to multiple environments and challenges.

Character structures differ, and malignant aggression, organized as it is within specific structures, may never be manifested. Moreover, it takes different forms. It can be vengeful or ecstatic hate and destructiveness. It can be sadistic, with the desire to have absolute control over others, or masochistic in wanting to be completely under another’s control. It can be a passion to destroy and tear apart living things. Such forms are social categories resulting from man’s history and institutions. For Fromm, the way to reduce malignant aggression is to radically alter ‘techno-cybernetic society’, to create new forms of decentralization in which man would be freer to assert his self and live the good life.

Not all psychotherapists fall within the schools mentioned. Some, like Storr (1968) adopt almost completely Lorenz’s instinctual view and hydraulic model of aggression, adding to it various psychological mechanisms that inhibit or channel its expression. Storr feels that aggression is an essential element in society, encouraging competition for food and sex, and ensuring peace and order through status hierarchies. Since it is instinctual, it is “impossible to believe that there could ever be a society without strife and competition”. Moreover, aggression is not all negative. In childhood it is a drive toward the eventual independence and separation from the parents. Indeed, as an adult, the more dependent a person, the more latent the aggression.

Aggression is also a means by which people establish their identity. Identity requires opposition, which is manifested through aggression. The negative effect of aggression is due to confusion between it and paranoid hostility or hatred (in which frustration plays a large role). Such hostility is reduced by encouraging competition (to drain it off), diminishing overpopulation, and preventing aggression from turning into hate (Rummel, 1977).

A purely environmentalist theory of aggression was elaborated by the neo-Freudians, i.e. those who have unequivocally rejected the Freudian theory of instincts, including the determining role of the Oedipus complex in the development of personality. They have adopted from Freud and
placed at the center of their ideas the decisive role played by the experiences, the traumas, the
events of infancy in the whole subsequent development of personality, including the aggressive
or non-aggressive bent of the personality. In this environmentalism the concept of ‘environment’
becomes extraordinarily narrow, for it actually means nothing more than the family and, within
the family, the mother. It is the family and particularly the relationship of the mother to the child
that decides, once and for all, whether the child will become aggressive, and to what extent.
Erikson (1969) writes: “..the drives man is born with are not instincts they are.. drive fragments
to be assembled, given meaning, and organized during a prolonged childhood.”, The basic
character of the person is determined in early childhood, under the influence of parental
environment, states Horney (1946) in a similar vein.

As a consequence of the narrowing down of the concept of environment, the following factors
play a decisive role in the shaping of the personality, as far as the neo-Freudians are concerned:
whether the mother cuddles the child or not, does the child partake of her love by means of the
‘warmth of her body’, does she keep to the hours prescribed for breast-feeding, or is the infant
fed when he desires (according to Erikson the Dakota Indians are not aggressive because they
had been fed whenever they desired). Furthermore, is the child weaned suddenly or gradually
(the first become aggressive, since they had had to undergo a trauma, whereas the second are
not), are they toilet-trained by force or do the parents wait until cleanliness becomes the child’s
own requirement, are they being punished for messing themselves, etc. In other words, the
satisfaction of the so-called ‘oral’ and ‘anal’ needs, or traumas, stemming from such situations
are decisive regarding the future of the personality – these are the factors that determine the
aggressive or non-aggressive bent of the future personality.

However, as Heller (1979) points out, if the environment artificially eliminates all frustrations
from childhood, then frustration-tolerance cannot evolve, and the development of the personality
of the child-ideal posited by the neo-Freudians may head in the direction of two kinds of
behavior. Either he would react with aggression to all manners of frustration (since he never
became ‘accustomed’ to its tolerance), or would not react with so-called ‘aggression’ to any kind
of frustration at all, since all the psychological conditions for resistance have been smothered in
him.

Furthermore, Whiting & Child (1964) compared 52 cultures with regard to suckling and
weaning, ‘toilet training’, the development of independence, the relation to aggression, and
sexual freedom or lack of it. The examination bore the following results: there is no kind of
correlation between these various types of behavior, respectively, their formation. And what
interests us particularly: there is no significant connection between the duration of suckling, the
gradual or sudden nature of weaning, the beginning and strictness of anal training on the one
hand, and the permissibility or prohibition of aggressive behavior on the other hand.

(c) Frustration-Aggression (F-A) theory

The F-A theory is a relatively old one. McDougall (1926), Freud (1920), among others, had
suggested it at one time or another, but the theory received its classic expression in the work of a
group of Yale psychologists (Dollard et al., 1939). First, they equated aggression with the desire
to hurt or injure others. This effectively confused the various forms of aggression with one overt manifestation and confounded the bases of aiming to harm another, which may be instrumental (as in spanking a child), defensive (as in kicking an attacker), or hostile (as in spreading malicious gossip). Were one to equate love with kissing, the conceptual cognitive confusion would be no less.

Second, frustration was defined as an interference with a goal response, thus keying frustration to an objective barrier or difficulty, and to manifest behavior. Interference was felt to be through punishment or goal inaccessibility, further confusing frustration as blockage with frustration as deprivation (Maslow, 1941; Fromm, 1973; Rummel, 1977). On this conceptual base, the Yale group put forward its famous assumption: “This study takes as its point of departure the assumption that aggression is always a consequence of frustration. More specifically the proposition is that the occurrence of aggressive behavior always presupposes the existence of frustration and, contrariwise, that the existence of frustration always leads to some form of aggression” (Dollard et al., 1939).

They further hypothesized a direct positive proportionality between the instigation to aggression and the amount of frustration. This amount depended on the strength of the drive toward a goal, the degree of interference, and the number of frustrated responses. The resulting instigation to aggression will be directed toward the perceived agent of frustration (displacement), or to the self, and the act of aggression reduced instigation to aggression (catharsis).

More than two decades of research has shown that frustration does not invariably lead to aggression, that frustration can lead to non-aggression, that aggression can occur without frustration, that in some cultures aggression is not a typical response to frustration, that some situations (such as threat and insult) can evoke more aggression than frustration, that the injustice of frustration is more significant than frustration itself, that frustration subsumes a diverse set of conditions, and that the F-A linkage need not be innate and could be learned. The widespread acceptance of the F-A notion is perhaps attributable more to its simplicity than to its predictive power (Rummel, 1977).

The original reactive-mechanistic F-A hypothesis of the Yale school has not stood up against the evidence. Its most fervent critic and advocate, Berkowitz (1962; 1965; 1969), argued that it should be altered in at least three ways: First, the emotional reaction (‘anger’) resulting from a frustration creates only a readiness for aggressive acts. Second, aggressive responses will not occur, even given this readiness, unless there are suitable cues. Third, suitable cues may lead to aggressive behavior by arousing previously learned but latent aggressiveness habits.

This modified F-A hypothesis implies that the existence of frustration does not always lead to some form of aggression, and that the occurrence of aggressive behavior does not necessarily presuppose the existence of frustration. Furthermore the important observation is made that “The frustration-aggression relationship may be learnable without being entirely learned” (Berkowitz, 1969). In the 1965 reformulation of the theory, the perception of frustration is considered to arouse anger, which functions as a drive. Aggressive behavior does not occur unless evoked by external cue stimuli; but the occurrence is an inherently satisfying response to the anger. Anger is conceived as an inborn reaction to goal blockage, The second factor is the interpretation of the
situation. Prior learning may influence how a given situation is perceived, and therefore define the appropriateness of behavior. Only a narrow range of objects provides satisfying targets for man’s aggressive responses, but almost any form of aggression can be satisfying so long as the angry person believes that he has in some way injured his supposed frustrater.

(d) Social Learning theory of aggression

A contrasting approach to aggression is provided by social learning theory (Mowrer, 1950; Rotter, 1954; Bandura, 1973; Bandura & Walters, 1959). As in the instinctualism of some ethologists, the person is omitted. But rather than being an innate drive in search for gratification, aggression is said to be acquired through experience, behavioral models, and reward and punishment. The basic focus is on aggression as socially defined injurious or destructive behavior. Man learns to be aggressive when such behavior enables him to satisfy his wants or desires, when others’ aggression is perceived (through movies or television, say) to be rewarded, and when alternative nonaggressive behavior is less successful. Man soon realizes that strong assertiveness pays, that ‘the squeaky wheel gets the oil’. Once learned, and reinforced through social approval and acquired status, through the esteem and pride of success, and through observing the success of others, aggression will be avoided only if it becomes risky, if costs in punishment or negative sanctions develop and nonaggressive behavioral alternatives are rewarded (Bandura, 1973). This theory of aggression is fundamentally behavioral (Rummel, 1977).

(e) Cultural Learning theory of aggression

According to some cultural anthropologists (e.g. Alland, 1972), aggression is seated within a culture; it is learned in the same way a language is learned. To understand it, the research should focus on the cultural context of aggression and its function in the maintenance and development of the culture.

The basic observation is that some cultures are relatively free of collective aggression and seldom manifest interpersonal violence and destructiveness. Therefore, although man has the potentiality for aggressive behavior, whether it is manifest is a matter of cultural learning. Man is not aggressive. Cultures are aggressive.

Clearly, the cultural approach shares with social learning theory the emphasis on the external sources – on learning. They differ in methodology, one centering on quantitative laboratory experimentation, the other on the naturalistic observation and absorption of cultures.

They differ also in the focus. Learning theory emphasizes that which impinges on the individual. It is individual centered, stressing the development of aggression as an interaction between response, reinforcement, stimuli, and so forth. The cultural approach, however, is less concerned with the individual and some determinate variables than with the total field of norms, meanings, and values within which certain behavioral patterns develop (Rummel, 1977).
(f) The self-esteem theory of aggression will be considered later on.

That instincts produce aggression, that drives generate aggression, that learning creates aggression – each proposition, standing by itself, is a simplistic theory. All dimensions are present to some degree and are simultaneously part of a field of relationships and dynamic forces that can modify, dampen, or inflate aggressive impulses, attitudes and behavioral dispositions. The whole is a complex of perception, personality, behavioral dispositions, and expectations. To emphasize one without the others within the field is to forget that man is always a feeling-thinking-doing, integrated totality (Rummel, 1977).

This means that pugnacity or self-assertion or protectiveness may be aroused, but no aggression may occur because the self wills otherwise, because no triggering situation is perceived, because expectations suggest defensive behavior, or because one’s mood is inappropriate. On the other hand, a person may act aggressively even though such needs are satiated, because it is in his character to do so in the perceived situation. Finally, needs or character aside, a person may act aggressively in the pursuit of his superordinate goal. Aggression may be a learned instrumentality for achieving self-esteem, for striving upward.

In the following paragraphs we shall scrutinize more closely the concepts of aggression encountered in the theories.

The Instinct Conception of Aggression

“The ‘instinct of aggression’ (as well as the concept of aggression of environmentalism) is a bottomless bag into which it is possible to stuff the most diverse behaviors, attitudes, impulses, activity types, feelings, or character traits. Should someone commit parricide, slam the ink-bottle to the floor, play chess, work, be jealous or envious, take revenge, be angry, play football or watch the game, write a book, or should he entertain prejudices, should he argue, should he condemn or accuse, should he prohibit or act in disregard of prohibition, should he revolt or not revolt, should he do business, make friends or love, or should he not make friends and not make love – all this could be ascribed as a subtle or not so subtle manifestation of man’s ‘instinct’ (or drive, or motive) of ‘aggression’. This curious homogenization is more or less typical of every theory of aggression, but particularly so of the idea of the instinct of aggression. The contents of this peculiarly homogenized ‘catch-phrase’ are, naturally, divided in two: into the compartments of the ‘useful’ and of the ‘harmful’ manifestations of the aggressive instinct” (Heller, 1979).

The theories regarding the genesis of the instinct of aggression may be roughly divided in two. According to one concept the aggressive instinct of man is rooted in his animal origin; one of the basic instincts of higher order animals being the ‘instinct of aggression’, which also remains the basic instinct of the social animal (to use Aristotle’s expression), of man. This is how Freud often, if not always, analyzes ‘the instinct of death’, this is how Mitscherlich analyzes his own ‘destrudo’, and it is this notion that guides Lorenz in his On Aggression of his later period.
According to the other concept, the instinct of aggression is a peculiarly human drive, intraspecific aggression being exclusively characteristic, of all living beings, of man. The advocates of this interpretation find the causes of the formation of the instinct of aggression in man’s particular natural history, in the history of the formation of mankind. Thus, according to them, aggression is precisely specific to the human species.

These two main tendencies cannot be sharply differentiated from each other, and there are a number of transitional theories. Moreover, in the second interpretation, the use of the term ‘instinct’ is not quite clear. (There are some who tie the formation of aggression, as an irresistible drive characteristic of the entire human being, to the demolition of instincts, using two different concepts of instinct as applied to man and to animals). Nevertheless, they share the thought that in the case of ‘aggression’ we are dealing with a drive that is characteristic of the human species in general, of something given to the individual through the genetic code, of something having the force of compulsion (Heller, 1979).

Let us first look at Lorenz’s (1966) definition: “The subject of this book is aggression, that is to say the fighting instinct in beast and man, which is directed against members of the same species”.

Thus Lorenz already posits the existence of a separate instinct (general drive) in the case of animals, an instinct which motivates intraspecific fight. At the same time he classifies the instinct of aggression among the four basic instincts. These are, according to him, “hunger, sexuality, aggression and fear” (p. 211). Heller (1979) has argued that practically all those forms of behavior Lorenz describes as ‘instinct of aggression’ actually pertain to the instinct of reproductive behavior. The very first example analyzed in the book – the territorial fight of the coral fish against intruders of their own species – clearly belongs within the realm of ‘reproductive behavior’.

Predation, the hunt, can be motivated by hunger. But what about the defense against the animal of prey? And the defense of the offspring by a mother animal against members of another species? According to Lorenz’s own definition (as intra-specific fight) it can by no means be motivated by aggression. Then, perhaps by fear, it being one of the four basic instincts? We could argue this were it not for the fact that Lorenz defines the four basic instincts in several instances, but in varying ways: “hunger, love, fight, flight” (p. 84) or “hunger, sexuality, flight, and aggression” (p. 100). But then fear cannot be either defense against the animal of prey, or the drive of defending one’s young, for fear is identical with escape, whereas in the example above the animal does not escape but fights. And ‘fighting’, on the other hand, is identical with aggression (intraspecific fight). But perhaps the defense of one’s young can be explained by ‘love’? By no means, since love is identical with sexuality. Thus one of the greatest observers of nature in our time has elaborated a theory of instincts according to which the simplest, most commonly known or experienced facts become inexplicable (Heller, 1979).

Instinct implies unlearned and species-specific behavior. There is wide agreement that the fighting and threatening behaviors of animals are nearly always species-specific reactions to sign stimuli from conspecifics. Whether these features are reliable criteria of ‘instinct’ is a separate question. It may no longer be worth asking, given the recognition that species-specific behaviors
can develop from learning and other developmental interactions with the environment – interactions that are themselves shaped by evolution. Fighting styles and ritualized threats do not usually vary within a species except in rare instances. The frequency of aggression varies widely within a species and is related to differing social organizations caused by local conditions.

Variations in social organization can influence the likelihood of aggression. Perhaps the best working assumption was suggested by Wilson (1975): Aggression occurs when it is profitable.

To explain diversity in intraspecific social organization and social behaviors such as aggression, Wilson has proposed that such species traits are not inherited with fixed features but can vary adaptively along a ‘behavioral scale’. If an animal’s social system can vary with population density or food distribution, then the entire range of variation may be considered as one complex, flexible adaptation acquired by natural selection. Aggression (for instance, on territories) ought to be most adaptive if it is rare when population is scattered and becomes increasingly frequent and intense when population is dense. Whether a flexible trait that is sensitive to ecology ought still to be called an instinct is less important than demonstrating that it is a species characteristic (Schuster, 1978). The possible existence of behavioral scales leaves unresolved the relation between an entire social system and the social behaviors of individuals living within that system. On the one hand, aggressive (and other social) behaviors used for cooperating and competing are highly species-specific, except in frequency and intensity; on the other hand, the overall social system shows greater flexibility. A partial solution to this paradox is that group structure is not free of genetic constraints (Kummer, 1971). The structure emerges from complex interactions among the social behaviors of individuals, the local population size, and environmental conditions.

There ought to be an intimate connection between group structure and individual behavioral traits because the attributes of a social system will be selected only if they benefit the individuals in the group. And individuals will be selected for behaviors that enable the group to function smoothly. As Hinde (1974) has emphasized, the features of individual and group are parts of an adaptive complex, so that any feature is linked to many others.

Schuster (1978) has pointed to a troublesome element in Lorenz’s theory, namely that this theory requires us to assess the level of man’s aggression in relation to that of other species. Lorenz rates human aggression highest because he is bothered by the recent proliferation of nuclear weapons, political terrorism, and urban violence. But one could be just as struck by how little violence occurs in even the most densely packed ghettos, in comparison the aggressive and sexual nightmares created by overcrowding cats and rats. Man’s reproduction continues, and murder remains a rarer event per capita than in the low density of a lion society (see next paragraph).

War is an obvious instance of mass murder; the Nazi atrocities even more so, but is a war between rival armies to be counted as one quarrel between two countries or as thousands between individual soldiers? These comparisons are not offered as evidence that man is or is not less aggressive than a lechwe or a lion. Measurement problems across species make such comparisons meaningless. What is an aggressive behavior? Hinde (1974) discusses the problem at length. If joke telling or capitalist competition were not included, the level of man’s
aggressiveness would alter accordingly. How should we weigh the many dimensions of aggressive behavior? Is the lechwe more aggressive than the lion because the lechwe fights more often, or is the lion more aggressive because it kills? Does a ritualized response count more than an unsterotyped threat-charge? Should a fight in a widely dispersed species count more than in a densely packed species? Should intraspecific aggression count the most? In man, the problem of assigning a level of aggressiveness to the species as a whole is further complicated by cross-cultural variations even more diverse than the intraspecific variations in social organization seen among animals (Schuster, 1978). Hinde (1971; 1974) has also pointed to some problems of definition in relation to natural selection: “If aggressive behavior is held to include all ways in which man expresses his individuality or asserts himself over his physical environment, we should clearly be badly off without it. But surprising as it may seem, there are some who argue that aggressive behavior defined in the narrow sense of behavior likely to cause physical injury to others is a desirable human characteristic. Such arguments rest on loose thinking. For instance, the view that aggressive behavior must be desirable because it arose through natural selection involves confusion between advantages to the individual and advantages to the species, and neglects the changed social environment in which man now lives. The view that aggressiveness is beneficial because it ensures that the fitter individuals get precedence in access to valuable commodities equates fitter with more aggressive and is therefore circular”.

According to the behaviorist interpretation instinct does not exist – or at least cannot become the object of scientific investigation – (nor does internal stimulus exist), but man and animal alike are characterized by movement coordinations or types of reaction that are independent of each other and are elicited by external stimuli. Animal and human organism alike is some kind of mechanism which is conditioned in diverse ways by external stimuli. As Watson (1959) writes: “Man is an animal different from other animals only in the types of behavior he displays”. Skinner (1972) claims: “Instinct and drive are fictions – things put inside a person to explain his behavior.. If food is reinforcing, it’s not because food reduces a drive but because it has been a very good thing for the species that food has reinforced the behavior of hungry people”.

From the point of view of behaviorist environmentalism categories such as ‘human nature’, ‘human essence’, ‘species character’ are irrelevant. Man can be conditioned to everything, without limit in the case of Watson, within the limits determined by genetical facts for Skinner. The latter, however, does not touch upon behavior. The individual may relearn anything at all with regard to behavior, there is nothing in his constitution that resists or could resist the process of ‘relearning’. Heller (1979) states that “behaviorism is the appropriate ideology of sophisticated manipulation. Human beings are, in the last analysis, machines, machines for relearning. But to keep machines in working order it is necessary to have someone to guide the machines. Modern machines are guided by science. The responsibility of science is to decide what ‘stimuli’ should be ‘administered’”.

In what way is Frustration and Aggression (Dollard et al., 1939) consistently behaviorist? First of all because it explains aggression on strictly ‘environmentalist’ grounds, moreover as response reaction to a given stimulus. This stimulus is frustration. There is no stimulus without response: “the existence of frustration always leads to some form of aggression” – thus the categorical declaration on the very first page of the book. A stimulus elicits a response reaction, and it is only between these two that there can exist a rationally measurable and examinable
connection, which is also an inevitable connection. The idea that the same frustration may provoke aggression in one personality – as a result of his total personality- whereas it may not provoke aggression in other personalities – still as a result of the organic unity of those personalities – is irrelevant from the behaviorist mode of inquiry. Likewise one may not ask whether the same stimulus may signify frustration for one person, but not for another. For if one does, it would already be a matter of ‘evaluation’, a matter of the fact that different persons interpret the same stimulus in different ways, from the point of view of their total system of values. Either one of the considerations mentioned above is sufficient to place in jeopardy the mechanistic interpretation of the human organism.

Human psyche being only a ‘black box’ it should be ‘bracketed’ according to Dollard. What can be observed and studied as behavior is simply one stimulus one response, one frustration – one aggression.

How do Dollard and his collaborators conceive of frustration?

“Frustration is independently defined as that condition which exists when a goal-response suffers interference”. Hence the whole of the personality cannot be frustrated; the sole origin and process of frustration that can be described is the blocking of a person’s rational goal (Heller, 1979).

The principal aspect of the contribution of Berkowitz (1962 et seq.) is that he adds the category of anger as a mediating element of the relationship frustration-aggression. Frustration does not elicit aggression directly, but through the intermediary of anger. Certain specific stimuli convert the already existing anger into aggression. “Anger refers to the emotional state, presumably resulting from frustration, which, in the presence of a suitable cue, instigates responses”. What is really significant in Berkowitz’s contributions, and which once again puts into doubt, willy-nilly, the correctness of the entire basic theory, is the concept of the so-called instrumental aggression he introduces. (In some place Berkowitz refers to the same as ‘strategic aggression’). Berkowitz was able to introduce the category of ‘instrumental aggression’, which, by the way, is by no means a behaviorist concept, because he acknowledged earlier the intermediary role of ‘anger’ with regard to frustration-aggression. Thus he had to describe these aggressive acts, and forms of behavior in which anger plays no role, and the causes of which, therefore, must be sought somewhere else than in frustration in a distinguishing manner since, according to him, frustration always elicits anger. The main examples of instrumental aggression are, according to Berkowitz, war and business competition. Both take place for specific objectives (acquisition of territory, wealth, etc.) which do not stem from frustration of goals, or at least not typically so. Yet in both cases we must speak of aggression, and for two reasons. First of all because the objective of the action is the harming or annihilation of the other party, that is, the objective is identical with that of the aggressive action or of behavior stemming from frustration. Secondly, because this kind of goal (the annihilation of others) makes it necessary to reorient anger into these channels, that is, to use aggression stemming from frustration as a tool and even to develop it by manipulation. The problem is not whether the initiators or propagators of wars really believe that the enemy has offended their nation or that he is guilty, harmful, worthy of hatred; but in order to achieve their goal they must make the masses they mobilize believe that the reserves of anger stemming
from frustration are being released through these channels. Aggression stemming from frustration is the necessary condition of instrumental aggression.

In spite of all these modifications the theory of Berkowitz remains a typical behaviorist environmentalist theory. And since he does not share, in consistent behaviorist style, the notion of ‘frustration tolerance’, his actual final conclusion does not differ from the end conclusions reached by other behaviorist theories of aggression. Since there is no society, and theoretically there can be none, in which frustration does not exist, in the broad sense of the term, and since it is not possible for human beings to become adults and co-exist in a society in which the individual never meets frustration in one goal or another, aggression is necessarily part of social existence (Heller, 1979).

**The Physiological Disposition Concept of Aggression**

Scott (1968) has argued that “All of our present data indicate that fighting behavior among the higher mammals, including man, originates in external stimulation and that there is no evidence of spontaneous internal stimulation. Emotional and physiological processes prolong and magnify the effects of stimulation, but do not originate it”. In other words, there exists “an internal physiological mechanism which has only to be stimulated to produce fighting”. Scott (1966): “Mechanisms exist which are easily excited by external stimulation and which function to prolong and magnify the effects of this stimulation”. And elsewhere (Scott, 1958): “A person who is fortunate enough to exist in an environment which is without stimulation to fight will not suffer physiological or nervous damage because he never fights. This is a quite different situation from the physiology of eating, where the internal processes of metabolism lead to definite physiological changes which eventually produce hunger and stimulation to eat, without any change in the external environment”. Berkowitz (1967) speaks of a ‘wiring diagram’, a ‘readiness’ to react aggressively to certain stimuli, rather than of ‘aggressive energy’ which may be transmitted genetically.

**Aggression as an Acquired Drive**

There appear to be somewhat different conceptions of aggression as an acquired drive. One of them stresses the role of anger, the other the role of conflicting expectations concerning the reinforcement of aggressive behavior.

Miller & Dollard (1941) and Dollard & Miller (1950) suggested that anger is a learnable drive; that is, they postulated that such reactions as threshing about, striking, clawing, and internal visceral responses as occurring innately to situations which produce ‘anger’. If these responses, or some of them, can be attached to previously neutral cues, then the cues will initiate the anger response. Since aggressive behavior is at least one of the consequences of anger, aggressive behavior would be a possible consequence of the presentation of the cues which now elicit anger. Miller & Dollard indicate that aggression will occur if it is the response most strongly learned to the anger. It appears that this formulation is a theory of how frustration may lead to aggression; anger, established by frustration, will, under appropriate circumstances, mediate between the
frustration and the aggression. A reduction in anger would be reinforcing (Cofer & Appley, 1964; Cf. Berkowitz’s modified F-A conception).

Buss (1961), in an extensive review of the field of aggression, has indicated that in his view the only aspect of aggressive behavior which may be considered at all in drive terms is the emotional response of anger. Unless aggression is ‘angry aggression’, Buss would see no reason for a drive interpretation of aggression, and, in any case, he himself sees little virtue in referring to anger as a drive. We return to his viewpoint in a moment.

The other interpretation of aggression as an acquired drive is offered by Sears et al. (1953). The goal response of aggression, they point out, is injuring another, and the child discovers that he can obtain compliance with his wishes by hurting someone else. Aggression so far would be only an instrumental response motivated by various needs and rewarded by getting one’s way, but again the drive is said to arise from a conflict between the expectations that the behavior will be successful and that it will not be successful. Presumably, in experience, aggressive behavior is both rewarded and punished, and hence the conflict and the induced drive. It will occur, however, only when instigated by people, at least until symbolic factors permit its internal instigation (Cofer & Appley, 1964).

Some of the ‘high-magnitude’ theorists of aggression, like Walters (1966), appear to have totally rejected the importance of innate factors in aggression, although he honestly admits that this rejection is based more on faith than on evidence. Such an article of faith is of course consistent with Walter’s rejection of the F-A hypothesis, which, in its dependence on Freud’s ‘primordial reaction’ concept, involves an innate component. As Patterson, Littman & Bricker (1967) point out, the initial formulation of the F-A hypothesis did not consider the process by which learned aggressive responses come under the control of the stimuli associated with frustration; it thus assumed that an aggressive response to frustration represented an innate stimulus-response relationship. Opposing the view of Walters is that of Berkowitz (1964 et seq.), who has argued that aggression does have an important innate component.

Much of the research dealing with socialization of aggression has stemmed from views of aggression as acquired rather than innate. Even the F-A hypothesis, in the form in which it most influenced research, emphasized learned rather than innate components (Zigler & Child, 1969).

Horn (1972) has argued that the aggressive drive should not be conceived of in a reified (ontologized, hypostatized) sense as a causal-genetic explanatory principle, but as a potential, as ‘Arbeitsanforderung’ which develops during socialization, and as a function of the quality of socialization. He suggests the possibility of developing a model of aggressive behavior which has as its point of departure the societal restriction and deprivation of the ego, which subsequently succeeds in alloplastic activity only by means of aggression, intentionally or actually destructive behavior directed against restrictive, depriving (real or imaginary) conditions or people.

Aggression as Habit; nonmotivational interpretation of aggression
Buss (1961), indicating that aggressiveness is or may be an enduring and pervasive personality characteristic, emphasizes the role of habit: “Aggression is the habit of attacking”. Four factors determine the strength of aggressiveness in an individual. One of these is the frequency and intensity with which attack, frustration, and annoyers (the antecedents of aggression) have been experienced. “The individual who has been the recipient of many anger stimuli is more likely to be chronically aggressive than the one who has been the recipient of few anger stimuli”.

Second is the extent to which reinforcement has followed aggressive or attacking behavior; reinforcement here may come from reduction of anger, from eliminating noxious external stimuli, or from the attainment of various rewards. Such rewards need not be directly related to the expression of anger, as would be hurting another; food, success, prestige, dominance, achievement could reward aggressive behavior. Punishment, on the other hand, would weaken aggressive behavior through conflict-aroused inhibition, if not through reduced habit strength. Nonreward of aggression (i.e. extinction) would reduce habit strength.

A third factor in determining the strength of aggressiveness is ‘social facilitation’. Buss suggests that the peers and older members of the individual’s group or family may provide models of aggressive behavior. In a highly aggressive group or family, the individual will probably be rewarded for initiating aggressive behavior; he will also often be attacked so that he will be frequently angry.

The final factor related to aggressiveness is temperament – that is, the extent to which the individual is impulsive, to which he is active, to which he reacts intensely to situations, and to which he is independent. These temperament variables, Buss believes, appear early in life, but it is not clear as to what extent they are constitutional or specific only to aggression (Cofer & Appley, 1964).

Appetence and Aggressive Drive; Aggression as a subsidiary ‘instinct’

The concept of appetence presupposes the presence of some endogenous energy source, whatever its physiological basis or bases, which seeks outlet through action. The postulation of an ‘aggressive motivation’ or ‘drive’ has probably caused more controversy among the students of aggressive behavior than any other single aspect of this phenomenon.

Basic to the concept of internal motivating factors is the presupposition that the energy involved accumulates with time when no releasing stimuli are available (see McFarland, 1978 for a review). The arguments countering the postulation of something similar to a true drive for aggression are based on logic (Craig, 1918; 1921; 1928; Marler & Hamilton, 1966; Scott, 1968): it would be disadvantageous for an organism to seek out situations in which fear and stress and even damage would be the outcome.

The arguments pro (Lorenz, 1950; Rasa, 1976; 1980) seem equally logical. It would be disadvantageous for an organism not to seek to better its position, and therefore the chances of passing on its gene material to the next generation. The presence of true appetence for successful fighting, as demonstrated in damsel fish and mice (Rasa, 1971; 1976; 1980; see below), supports
the second hypothesis but here the stress is on the successful. It has equally well been illustrated that unsuccessful fighting is responded to as a punishment: the animal no longer engages in it. Both the above hypotheses are correct when the term ‘aggression’, which was used previously as an equivalent in both cases, is modified. Self-defensive behavior is aversive, property-protective behavior appetitive (Rasa, 1980).

Craig (1918; 1921; 1928) explicitly stated that “even when an animal does fight, he aims, not to destroy the enemy, but only to get rid of his presence and his interference.. Defensive fighting pays.. No bird or mammal follows a policy of non-resistance.. On the other hand, aggressive fighting does not pay. Among animals, as among men, fighting is a wasteful and harmful means toward the attainment of the ends sought by the contestants.. Fundamentally, among animals, fighting is not sought nor valued for its own sake; it is resorted to rather as an unwelcome necessity, as means of defending the agent’s interests.. Animals do not enjoy fighting for its own sake. Unless his anger is aroused, the agent’s behavior indicates that he has no appetite for the fighting situation; he does not seek it.. As McDougall (1908) says, the stimulus of the instinct of pugnacity is the thwarting of some other instinct..” (Thus McDougall and Freud may be considered to be the founding fathers of F-A theory). Marler & Hamilton (1966) observed that: “The rarity of seeking for fights in animals is not altogether unexpected. Fighting is basically a means of competing more effectively for any commodity in short supply – food, water, nesting sites, mates, or space. Unless something is gained, fighting is at best a waste of time. At worst it engenders the possibility of distraction from other dangers, or of injury, or of death, An endogenous tendency to seek out fights would thus have hazardous consequences”. And Schuster (1978) argued that “A motive to fight for its own sake would be selected against by the chance of injury or ‘aggressive neglect’, excessive aggression at the expense of more productive behaviors”. Tinbergen, 1956; Scott, 1968; Hinde, 1960; 1970; 1974; Wilson, 1971; 1975; Crook, 1973; and others have made similar observations.

Scherer, Abeles & Fischer (1975) proposed the notion of ‘subinstincts of aggression’ or aggression as a subsidiary instinct. In their view, aggression is not a general instinct in its own right, but rather a part of more general instincts such as reproduction, feeding, or defense. They argue that it seems more reasonable to assume aggressive subinstincts in the service of important species-preserving instincts than to posit a general aggressive instinct whose consequences would be dysfunctional during much of the individual’s life span, Similarly, they write: “An innate ever-accumulating aggressive energy has its dysfunctional side. It is like having a self-destructive device built into the organism, like a lysosome into the cytoplasm” (The metaphor is a somewhat unfortunate one, for we know that the cytoplasm does contain its own ‘suicide-bag’).

The controversy of whether an aggressive appetite or drive exists or not has been confounded by another controversy: that of group selection (e.g, Wynne-Edwards, 1962) versus ‘genic’ selection or selection on the individual level (e.g. Dawkins, 1976).

According to the group selection paradigm, the killing or serious injury of one species member by another should occur only very rarely in nature. Lorenz (1966) expresses this view as follows: “Though occasionally, in territorial or rival fights, by some mishap a horn may penetrate an eye or a tooth an artery, we have never found that the aim of aggression was the extermination of
fellow members of the species concerned” (This fits in very well with Lorenz’s view of the ‘functions’ of aggression, dispersal etc., which are indeed eufunctional at the group level). And Brace & Montagu (1977) maintain that “far from desiring to inflict injury the aggressors seek to reduce the amount of aggression accompanied by a minimum amount of injury to others and as little social disruption as possible”.

Recently, however, as more and more species have been subjected to extended field observations, the reports of intraspecific killing and violence have been accumulating. Wilson (1973) comments that “Murder has now been observed frequently enough in gulls, hyenas, hippopotamuses, langurs, macaques and some other vertebrates to suggest that it is both widespread and, Konrad Lorenz and some other popular writers notwithstanding, far more common and hence ‘normal’ in these species than in man”. For example, adults of various colonial seabird species are known to attack the young of the species members. Marler (1976) cites one study where 23% of the 1,400 herring gull chicks hatched were killed and sometimes eaten by adult birds, usually when they strayed from their parent’s nest (For other examples of kronism and cannibalism in animals, especially birds, see: Wynne-Edwards, 1962).

The growing list of animals now known to kill conspecifics also includes spiders, beetles, dragonflies, bees, crabs, sparrows (Ghiselin, 1974), storks, European blackbirds, eagles, musk oxen, hamsters, rats, rabbits, lemings, bears, wolves, wild dogs, lions, elephants, and some fifteen primate species (Hrdy, 1977a,b; Mohnot, 1971; Sugiyama, 1965; Yoshida, 1968; Rudran, 1973; Angst & Thommen, 1977; Schaller, 1969; 1972; Bertram, 1975; 1976; Struhsaker, 1977; Wolf & Fleagle, 1977; Goodall, 1979; Eaton, 1975; Cloudsley-Thompson, 1965; Mech, 1970; Schenkel, 1966; Dart, 1961; Kruuk, 1972; Armstrong, 1947; Simmons, 1970; Bygott, 1972; Wilkinson & Shank, 1976; and others (for reviews see: R.N. Johnson, 1972; Wilson, 1975; Angst & Thommen, 1977; Fry, 1980; van der Dennen, 1980).

While such violent behaviors certainly contradict a species preservation paradigm within which animals are assumed to act for the social good, such actions often are explicable through individual or kin selection theory, which predicts that animals may in fact kill or harm members of their own species when conditions are such that it is in the actor’s genetic self-interest to do so; that is, if the pay-offs in terms of fitness are greater than the costs to fitness (Fry, 1980). The evolutionary rationale has been elaborated by Maynard Smith (1974; 1978), Maynard Smith & Price (1973), Parker (1974), Hamilton (1971); (see also: Wilson, 1975; Dawkins, 1976; Fry, 1980; Geist, 1978). In general, these examples illustrate that the adaptiveness of aggression in animals, including species with frequent aggression or killing, can be understood as a feature of social organization for coping with particular environments (Schuster, 1978). Lack (1969) and Marler (1976) have also emphasized that all competitive social systems, even the most aggression-free, can sentence losers to peripheral areas where isolation, poor food, predation, and a failure to breed can lead to a final solution as surely as violent death.

It is important to recognize that a contest for scarce resources for reproduction aims at maximizing the reproductive fitness of the successful individual. An individual enhances his reproductive fitness, however, not only by successfully competing for resources, but also by directly reducing the reproductive fitness of other individuals (Geist, 1978).
This can be done by destruction of nests, eggs, and fry, as practiced by some fish (Collias, 1944), by destroying the young of competitors as seen in langur monkeys (Sugiyama, 1965; Hrdy, 1974) and in lions (Schaller, 1972; Bertram, 1975), by interfering with mating and rearing of young (Collias, 1944), by keeping competitors in the state of costly excitement and stress (Barnett, 1958; 1967; Bronson & Eleftheriou, 1964), which may result in psychological castration (Guhl, 1941) and, in mice, reduce the size of seminal vesicles and thus sexual competence (Bronson & Eleftheriou, 1964), or lower the resistance of competitors to infection (Vandenbergh, 1960; Stein, Schiaui & Camerio, 1976), or cause them to lose body weight and develop faulty body insulation (Allee & Guhl, 1942), or reduce their social activities and thus their chances of breeding (Archer, 1970), or delay their mating and nesting so that their young are raised at an unfavorable time, as may be the case in prairie chickens (Robel, 1970), or affect the offspring of competitors in the intrauterine environment so that they are destined to be less viable and socially competent (see Thompson, 1957; Lieberman, 1963; Weltman et al., 1967) than its own offspring, or inflict expensive body repairs on subordinates through frequent wounding (see Scott, 1966), or inflict so much stress that the subordinates ultimately die of the unpredictable infrequent attacks (Welch & Welch, 1970), or become easy prey for predators (Robel, 1970).

To maximize reproductive fitness it pays not only to maximize one’s own reproductive output but also to minimize that of others, provided it costs little. One can work ‘both sides of the fence’, as obviously is being done. The point is to leave the greatest possible proportion of offspring blessed with one’s genes in the following generation, not the greatest possible number (Geist, 1978). Nor must one wait until adulthood to win access to scarce resources essential to reproduction. It obviously pays to follow strategies that maximize one’s gains in adulthood by controlling the future. Such a strategy is particularly important if adult competitors are armed with dangerous weapons, and overt aggression is dangerous to both competitors. Granted a high probability that individuals born together will also live together, it pays not simply to defeat prospective competitors early during ontogeny, but to somewhat impair their body growth and competitive abilities as adults. This can be done by interfering with their acquisition of resources needed for growth, or alternatively to interfere with the assimilation of these resources. If this hypothesis is valid, we expect some ‘weapons’ in competing juveniles, and we expect development of a rigid dominance hierarchy among juveniles which is maintained in adult life. Specialized weapons are found in suckling pigs (Sus scrofa) in the form of short, sharp, but temporary canine teeth. These are used in agonistic encounters that determine which position an individual will occupy along the row of maternal teats; the further forward an individual can establish itself the better the milk supply, the better its growth, and the smaller the chances of its being trampled by the female’s hind legs (Hafez & Signoret, 1969). Juvenile aggression and specialized weapons pay off in larger body size and therefore probably increased combat ability as an adult and greater access to scarce resources. The establishment of rigid dominance hierarchies in juveniles that apparently last throughout adulthood have been suggested for canids (see Bekoff, 1974) and ungulates such as Antilocapra, as can be deduced from the work of Bromley (1967) and the subsequent work of Kitchen (1974).

It is obvious from the foregoing that play in juveniles takes on a somewhat less innocent image than it previously had. If a juvenile can reduce the body growth of his ‘playmates’ by gaining dominance, he inflicts on them a permanent disadvantage. This could conceivably be done by (1)
imposing stress that causes a reduction in circulation in tissues of low growth priority through hypertension, with concomitant reduction of the size of blood vessels in these tissues by a mechanism proposed by Ooshima et al. (1975), resulting in less than maximum possible growth; and by (2) increasing his playmates’ cost of living by costly excitation. Play behavior has not been examined from this perspective as yet (Geist, 1978).

It is van Dijk’s (1977) opinion that the age-old debate between the conditional and unconditional views of aggression is partly due to a misunderstanding. Supporters of the conditional view take ‘aggression’ to mean behavioral patterns which are directed to the infliction of injury (violent attacks), while several ethologists use the concept ‘aggression’ to designate behavioral patterns which are directed to the achievement of dominance (dominance behavior). The latter pattern consists of highly ritualized charging displays and are only rarely associated with acts of violence (Rasa, 1971 et seq.).

In many higher species the persistent struggle for the possession of commodities has been superseded by ritualized dominance fights. These fights bring about stable dominance relations between neighboring conspecifics, and are spontaneous in the sense that there is no economic reason for them. The causation of dominance behavior has been explained by Lorenz (1963) and Rasa (1971 et seq.) in terms of an energy model of motivation. The empirical datum that charging displays remain dormant for a long time if the hierarchical relations within a group of animals are stable is difficult to reconcile with the energetic explanation put forward by Lorenz. It would appear that the regularity with which the males of certain species carry out charging displays can be more adequately explained by the ‘hierarchico-cybernetical’ model of Baerends (1960) and Tinbergen (1969). The original versions of the latter model of motivation were presented as tentative models of the complex organization of the behavior system for reproduction of certain species. According to this model, the goal-orientedness of the reproductive system is based on the activity of hierarchically-structured functional centers in the central nervous system. The reproductive system as a whole is thought to be activated by global inputs from the environment. More specific stimuli from the environment determine which concrete action patterns are subsequently displayed by the animal. The effects of these patterns are continuously fed back to the higher centers of the system. The perception of certain global goal situations would result in the behavior system as a whole being switched off. The available information on the occurrence of dominance behavior in sticklebacks (Tinbergen, 1969), passerine birds (Hinde, 1966), damselfish (Rasa, 1971), and chimpanzees (Goodall, 1971) suggest that these patterns have a similar hierarchico-cybernetical organization. The males of the above mentioned species are strongly motivated to display dominance behavior when they perceive that the dominance relations between them and a neighboring conspecific have become unstable. The presence of a rival is in itself enough to trigger off charging displays. Some animals regularly display appetitive behavior towards their rivals during such a period. The increased sensitivity to stimuli from neighboring conspecifics ceases as soon as the dominance relations are stabilized.

The hypothesis that the dominance behavior of some species is organized as outlined above, is supported by the results of certain neurophysiological experiments. Neurophysiologists have succeeded in eliciting both appetitive behavior (von Holst & Saint-Paul, 1960), and socially
adaptive charging displays towards rivals (Delgado, 1967) by the stimulation of implanted electrodes.

According to Goodall (1971) the charging displays of male chimpanzees play a vital role in the establishment of male dominance relations. In principle, the more frequently and the more vigorously a male chimpanzee displays, the higher he is likely to climb up the social ladder. On the one hand, these displays bring about stable dominance relations which prevent the group members from competing violently with each other for commodities. On the other hand, the charging displays themselves generate two forms of intraspecific violence. Factor analyses carried out by van Hooff (1973) showed a close statistical relationship between charging displays and violent attacks. Goodall (1971) observed several prolonged dominance fights between rivals which culminated in violent attacks. In addition to this male chimpanzees have been seen by Kortlandt (1974) to alternate their charging displays towards rivals with lethal attacks on young baboons and chimpanzees of neighboring groups.

Maslow (1936), who had made extensive studies of dominance relations among primates, suggested that there is a ‘dominance drive’. Van Dijk (1977) suggests the presence of homologous tendencies in human males. He puts forward the hypothesis that human males are inclined to try and impress their rivals with ‘charging displays’ (or a substitute) and violent attacks when their status is threatened. The following observations appear to be relevant to this hypothesis. Various anthropologists have pointed out that the urge for dominance is a male characteristic present in nearly all cultures (Lévi-Strauss, 1967; Claessens, 1970). The rare societies in which the men do not strive for prestige and power have specific customs which “can be interpreted only as a stamping out by the group of the impulse to dominate” (Maslow, 1937). Both anthropological and historical studies indicate that the exhibition of physical strength is a cross-cultural expression of high dominance status.

Objectivistic studies of the behavioral patterns shown by small children have brought to attention the similarity between certain rough-and-tumble play patterns displayed by small boys and the tentative charging displays made by young chimpanzees (Blurton-Jones, 1967; Etkin, 1967). The resultant hypothesis of a biological basis for rough-and-tumble play is supported by clinical studies of girls who had been neurophysiologically masculinized in utero. These girls have been reported to show significantly more rough-and-tumble play patterns than control groups (Hamburg, 1971; Etkin, 1967). It appears from objectivistic studies of boys of about ten years old in the USA (White & Lippitt, 1960) and West Germany (Mandel, 1959) that a distinction must be made between two separate patterns of aggression. The groups of juveniles under observation showed a violent as well as a more playful form of aggression. Mandel and White & Lippitt have, independently of each other, interpreted the latter patterns of aggression as an expression of the urge for dominance. Mandel concludes that aggression has both a spontaneous (dominance striving and expansion) and a reactive component (hostility and hatred). As a third component he identifies the need for contact. The aggression is primarily aimed at the affirmation of self-esteem. Both Mandel and White & Lippitt have occasionally observed how playful exchanges of aggression became violent after serious insults had been shouted. The latter authors also describe how one group whose painting had been criticized by a tutor, staged an attack on the members of another group. Furthermore, several social psychologists have recently come to the conclusion that attacks on a person’s prestige are much more powerful instigators to
aggressive behavior than frustration is. For instance Bandura (1976; 1978) states: “In instances where thwarting provokes aggression it is probably attributable more to the implied personal insults than to blocking of ongoing behavior”.

White & Lippitt (1960) put forward the ‘self-esteem restoration’ hypothesis as an alternative to the F-A hypothesis. They write: “This hypothesis also puts the frustration-aggression problem in a new light. Why does frustration so often lead to aggression? One major reason now appears to be that frustration, if it is felt as personal failure, is always a blow to self-esteem. Like being the victim of aggression, then, it mobilizes a need to restore self-esteem, and one way of restoring self-esteem is aggression”.

Similarly, in a participating observation study among the crew of a particular fishing boat, Aronoff (1967) concluded: “The captain’s aggression is usually an attempt to gratify his need for self-esteem”. For most people the sense of self-esteem is highly correlated with their self-perceived prestige or status. Thus, according to Feshbach (1971) “Implicit to threats to self-esteem are the impotence and diminished status of the injured party”.

Much of the laboratory evidence which is cited in favor of the F-A hypothesis (e.g. Berkowitz, 1962; see also Buss, 1961; Bandura, 1973) actually is in accordance with the self-esteem restoration hypothesis (or the status-threat hypothesis as van Dijk, 1977, calls it) because the operationalizations of ‘frustration’ as used in this paradigm are not at all operationalizations of “an interference with the occurrence of an instigated goal-response at its proper time in the behavior sequence” (Dollard et al., 1939), but are, as a matter of fact, more of the nature of ‘insults’. It would require a considerable feat of semantic legerdemain to accommodate insults within the category of frustration. Feshbach (1971) observes: “Violations to self-esteem through insult, humiliation, or coercion are powerful elicitors of hostility, probably the most important source of anger and aggressive drive in humans. Laboratory studies of aggression (Berkowitz, 1962; Buss, 1961) and clinical studies of violent men (Toch, 1969) consistently point to this relationship.

Implicit in threats to self-esteem are the impotence and diminished status of the injured party. One way of achieving a restoration of status and demonstrating one’s power is to injure the provoking agent. Thus, an instrumental element is introduced into the satisfactions associated with the infliction of injury”. The self-esteem restoration (or ‘self-consistency’) theory, which involves the inner core of the way in which a person perceives himself or what he really understands himself to be, holds that people will go to any extent to maintain their self-concept including violence. It identifies concepts like self-esteem and (moral) indignation as crucial factors in human aggression. In 1970 Kardiner pointed out that intimacy can be perceived by some people as a threat. Intimacy can threaten the self-concept in stimulating a fear of later rejection or provoking a fear of being possessed. It can thus become a source of aggression. He also emphasized that for some people violent body contact can be preferable to no contact at all. Horn (1973) holds that by means of narcissistic aggression the ego seeks to fend off further restrictions and functionalization in a technocratically organized society. And Fromm (1973): “If man cannot create anything or make a dent in anything or anybody, if he cannot break out of the prison of his total narcissism, he can escape the unbearable sense of powerlessness and nothingness only by affirming himself in the act of destruction of the life that he is unable to create”.

And elsewhere: “Destruction is the creative, self-transcending act of the hopeless and crippled, the revenge of unlived life upon itself” (for pertinent discussions of narcissistic aggression see also Kohut, 1973; Volmerg, 1977).

According to Rummel (1977) “man’s attitudes are organized into a reality-testing, moral self-striving for self-esteem. Much depends on what the esteem is based on. If, for a gang member, it is his ability to beat up an old lady, his esteem will be linked to such aggressive attitudes, and this aggression will be an integrated part of his behavior. A soldier in combat whose self-esteem is linked to his buddies’ opinion of him, may be an aggressive killer of the enemy in striving for approval. If esteem is tied to command and coercive power over others, one may ape the more successful and aggressive villains in movies and television”. He adds that narcissism is less solidly based in the scientific evidence than self-assertion, but there is systematic support for its existence: Cattell, 1972; Cattell & Horn, 1959; Cattell & Warburton, 1967.

In his clinical typology of violent men, Toch (1969) distinguished a subcategory of so-called ‘self-image defenders’ which is described as follows: “The self-image defender is a man who is extremely sensitive to the implications people make about his integrity, manliness or worth. His violence arises as response to challenges, retaliations to slights, or reactions against aspersions to his advertised self-conception. Some self-image defenders react at once – or even anticipate what they perceive as challenges or insults”. In analyzing the dyadic interchanges of assault-prone individuals, Toch found that humiliating affronts and the threats to reputation and manly status emerged as major precipitants of violence. In addition to their high sensitivity to devaluation, these individuals usually lacked skills for resolving disputes and restoring self-esteem by verbal means. Furthermore, as Schulz (1968) found in his victimological study: “The victims of many assaults and homicides have what may be called an aggressive-tyrannical personality and engage in acts with the offender which invite or excite assaultive response”.

The ‘third trend’s’ (Maslow, Fromm, Erikson and others) theory of aggression is organically connected with their general self-actualization theory. Thus the sole source of aggression is the frailty, ‘shaky’ character of our self-esteem. The person who has not become a fully developed individual, who is not self-actualizing, may easily see his ‘self-esteem’ challenged, Thus, as Gert & Mills have shown in their work Character and Social Structure even the ‘challenge to one’s habits’ may lead to the challenge of self-esteem. The consequence of the blockade of self-esteem, according to Allport (1961) is projection on the one hand, and regression on the other (infantilism and rage). The person who does not self-actualize (writes Erikson) does not develop frustration tolerance, that is to say the less the person is self-actualizing, the less ‘tolerant’ and the more likely to interpret everything as ‘directed against himself’, as frustration. If someone cannot actualize his true potentials, he will gather resentment against all those he considers the cause of his failure. If he cannot evoke love in the person he loves, he will hate the one he loved for the sake of the preservation of his self-esteem: “it is not I, it is he who is the cause of my failure”.

Heller (1979) comments: “..it is the ‘third trend’ that has formulated the only theory of aggression which I find convincing and true. I too believe that aggressive behavior, and its frequency, is not the inevitable manifestation of some aggressive ‘drive’, nor is it the consequence of the failure of psychological hygiene in infancy, nor does it necessarily stem from
the existence of groups, nor is it the reaction response to particular and isolated frustrating stimuli. Our impulses assume the form of rage aimed at the humiliation or destruction of other human beings because we are particularist persons, because we do not have self-confidence and self-esteem relying on ourselves, because we cannot actualize our potentials, and all this makes us suffer. We react with aggression to individual, isolated frustrations, and we consider them frustrations, because they affect our whole personality, because we conceive of them as an offense against our personality. We react aggressively against members of other groups because we project the lack of our self-esteem onto the existence or members of this group, because we can ‘rationalize’ our own weakness, our own lack of success by their existence and their successes. The psychological hygiene of our infancy has a frustrating ‘after-effect’ only if it is an organic part of the blockade of the development of our personality”.

The concepts of status-threat and self-esteem may be particularly relevant to explain ‘machismo’ types of aggression and violence, as if generated by some internal aggressive drive.

Van Dijk (1977) applied the status-threat hypothesis to criminal gang violence; collective acts of violence by adolescents. There are indications that most juveniles, irrespective of their cultural background, have a strong desire to be admired by their peers. Small boys tend to express their rivalry in rough-and-tumble play patterns (patterns which sometimes alternate with the infliction of injury on small animals). The rivalry of older boys takes more sophisticated forms – achievement in sports, the arts or at school. Sections of the younger population in industrial societies have few opportunities, for structural reasons, to impress their peers in such sophisticated ways. For lack of a better alternative, these adolescents continue to express their rivalry in rough-and-tumble play patterns. Since such behavior is considered childish according to the standards set by the dominant culture, these groups are liable to start experimenting with violence. Precisely because the boys concerned are themselves ambivalent towards their ‘achievements’, their mutual respect is generally low. Consequently, gang leaders are under constant pressure to prove their worth by engaging in further criminal activity. This multidisciplinary view of the dynamics of gang violence is supported by observations on the behavior of gang members in the Netherlands (Buikhuisen, 1966; Zwezerijnen, 1966), as well as by reports on juvenile gangs in the United States (Short & Strodtbeck, 1967; Horowitz & Schwartz, 1974; see also Yablonsky, 1962).

Is Aggressive Behavior Self-motivated?

As will be recalled, Rasa (1980) has argued that self-defensive aggression is aversive, while ‘property-protective’ aggression is appetitive. Studies undertaken to determine the presence of an accumulative factor have resulted in confusing the issue even further. In some cases, as in damsel fish (Rasa, 1969; 1970), swordtails (Frank, 1976; Goldenbogen, 1977) and mice (Garattini, Giacalone & Valzelli, 1969), the tendency to attack was shown to increase with time; in others, such as in cichlid fish (Heiligenberg, 1963; Reyer, 1975) it decreased. In order to explain this phenomenon it is necessary to examine briefly the instigating factors of aggression in these cases and the situations in which it is manifest.
Some species of animals are what one would term ‘year round’ aggressors. Their aggressivity is associated with the protection of some resource necessary for survival, like food, living space or rank position. Others, however, are aggressive only during the breeding season when aggression is associated with the protection of a breeding territory, brood and temporary sexual partner. Physiological studies (see Floody & Pfaff, 1974) have indicated that the latter form of aggressivity is associated, in males, with a temporary increase in male hormone and is coupled with breeding season. It has even been shown that, in red deer stags (Lincoln, Guiness & Short, 1972) both systems are operative, testosterone appearing to affect sexual aggression but not aggression shown at feeding sites.

The three species in which aggressivity has been shown to increase with isolation are either territorial, year-round breeders (swordtail, mouse) or species in which aggression is used in defense of a food source and living space (damsel fish). The two species of cichlid fish in which aggression decreases with isolation, however, are seasonal breeders which shoal subsequent to breeding. Lehrmann’s (1959; 1963) studies on the physiology of breeding in ring-doves may offer an explanation for the phenomenon observed in the latter case.

Ring-doves, when isolated from a sexual partner during the breeding season, lose breeding condition with time. Their androgen titer in the blood decreases and, with them, the tendency to court and defend a nest area. It is more than likely that a similar physiological basis can be found for the decrease of aggressivity with time observed in breeding cichlid fish but physiological studies here are lacking. Until more is known about the physiological bases of aggression in different species as well as the ecological situation in which it is expressed, it is inopportune to make wide-sweeping conclusions as to its causal factors and general nature in all species of animals (Rasa, 1980).

Schuster (1978) has argued that when fighting does lead to decreased aggression, it may be for reasons other than the discharge of aggressiveness. The most obvious is that the goal of the aggression has been achieved. In lechwe, master males vigorously chase all competitors from the mating centers until the area is cleared. The first victim is not treated more harshly than the last, and the number of successive chases has no effect on overall aggressiveness. The presence of a challenger near the mating center is the overriding elicitor of aggression. Examples such as the above confirm that a motivation like hunger, which is cyclic and appetitive in order to maintain internal body condition in good order, is fundamentally unlike the effect that reproductive state has on aggressiveness. An appetite for aggression is rarely seen.

Fighting requires energy. We know from the few quantitative studies on animal bioenergetics conducted to date (tree squirrels, C.C. Smith, 1968; Annan hummingbird, Stiles, 1971) that most animals exist on a more or less subsistence level, the energy intake covering the energy output with little extra on the plus side. If an animal must continually fight to repel rivals, the energy output would outweigh the input and it would lose condition. It would simply cost the organism too much. Such cases are known, as in the Uganda kob antelope where males on the breeding grounds which must continually repulse rivals are only able to maintain their positions there for a relatively short period of time (Leuthold, 1966). The most extreme case of this phenomenon on record is for the marsupial mouse *Antechinus* where the males fight fiercely for females pre-copula and all die post-copula (Lee, Bradley & Braithwaite, 1977). For most species,
however, especially those in which the defended living space or rank position must be maintained over a long period of time, such a strategy would be disadvantageous. In these species, alternatives to continued fighting have been adopted, e.g. visual, auditory, and olfactory signs of territorial occupation.

In social species, where individual recognition within the society is basic to its maintenance, the same problem of developing a means of circumventing continual fights is present to an even greater extent owing to continual proximity. Here, signals to indicate the fact that dominance relationships still hold must be even more frequently repeated and there seems to have been a selection for those requiring even more minimal energy expenditure. Examples are the flashing of the white eyelids in Hamadryas baboons (Kummer, 1968), the ‘staring out’ procedure in gorillas (Fossey, 1972) and the ‘head-lift’ in dwarf mongooses (Rasa, 1973).

An ‘appetite’ for aggression has been seen in some territorial species, such as hyena (Kruuk, 1972) that patrol their territories. Territorial wildebeest ritually challenge each neighbor at least once a day (Estes, 1969). The functions of patrolling must surely go beyond the mere urge for fighting to the overall purpose of territoriality. Challenge rituals may also provide social stimulation, which results in habituation to one’s neighbors as a means of reducing aggression (Schuster, 1978).

Furthermore, there are anecdotal accounts of domesticated cats (Ewer, 1968; Leyhausen, 1971), meerkats (Ewer, 1968), buntings (Andrew, 1957) and chimpanzees (Goodall, 1979) which appeared to ‘go looking for a fight’ with conspecifics. In the laboratory, the reward value of intraspecific aggression is suggested by the numerous demonstrations that winning or losing paired encounters can increase or decrease, respectively, subsequent attack rates in fish (Heiligenberg, 1964; McDonald, Heimstra & Damkot, 1968), mice (Uhrich, 1940; Ginsburg & Allee, 1942; Kahn, 1951; Scott & Marston, 1953; Lagerspetz, 1964; Brain & Poole, 1974), or rats (Seward, 1946). The reduction in attack initiation occurring after defeat is probably a straightforward avoidance effect due to punishment (cf. Hudgens & MacNeil, 1970). Increases in attack rates following victory are more problematic. In these experiments there was nothing contingent on winning. Therefore, the increases in attack rate in victorious animals suggests that successful attack may be intrinsically rewarding (Potegal, 1979).

For the opportunity to perform aggressive behavior against conspecifics, birds will peck keys (Thompson, 1964; Cole & Parker, 1971; Cherek, Thompson & Heisted, 1973); fish will swim through apertures (Rasa, 1971); and mice will bar-press (Connor, 1974; Connor & Watson, 1977), or run in T-mazes (Tellegen, Horn & Legrand, 1969; Legrand, 1970; Tellegen & Horn, 1972; Kelsey & Cassidy, 1976) and obstruction boxes (Lagerspetz, 1964). Rats (Dreyer & Church, 1970; Taylor, 1975) and hamsters (Eibl-Eibesfeldt, 1971) will run T-mazes for attack opportunities. Monkeys will pull a chain to provide themselves with an inanimate target (Azrin, Hutchinson & McLaughlin, 1965).

Potegal (1979) concludes his review on the reinforcing value of several types of aggression: “Although some questions remain, the light of evidence supports the conclusion from the earlier paired encounter studies that, under appropriate conditions, the performance of intraspecific aggression is positively reinforcing”.
Since the animals in these operant conditioning experiments were actively seeking out targets, it is clear that they were not fighting in order to “remove the presence or interference of another” (Craig, 1928).

Potegal (1979) also reviewed the evidence for the reinforcing value of predatory aggression (if considered to be aggression at all), the reinforcing value of defensive (irritable) aggression and the reinforcing value of intracranially elicited aggression, with *grosso modo* the same results.

If people did not enjoy violence vicariously, if there were not a modicum of morbid fascination with the agony, fear and pain of others, then how to explain the Roman circuses, the witch burnings, the public executions, etc., not to mention the interest of some individuals in violent spectator sports, from ancient gladiatorial contests to contemporary ‘demolition derbies’, the war movies, spy thrillers and action-packed Westerns, or the tabloid ‘pornography of violence’ magazines?

Though anger is regarded as a negative emotion by many psychologists (see next paragraph), there are recurring reports that at least some individuals show or report pleasure in expression of anger and/or overt attack. There have been such comments from or about children (Bovet, 1923; Bender, Keiser & Schilder, 1936; Goodenough, 1931), farm boys (Eibl-Eibesfeldt, 1974), graduate students (Richardson 1918), athletes (Melges & Harris, 1970), psychiatric patients (Hartman, Kris & Loewenstein, 1949; Anna Freud, 1972), western soldiers (Gray, 1967; Storr, 1972; Zimbardo, 1969), and non-western warriors (J.B. Watson, 1971).

The persistence of gratuitous cruelty and torture throughout human history has sometimes been explained by its reinforcing value (Storr, 1972). Such pleasurable feeling may not, however, be simply a concomitant of specifically aggressive, overt attack. Pleasure may derive from the vigorous physical activity of fighting, the accompanying arousal, or the successful performance of a complex fighting skill. Pleasure may also issue from the fruits of victory: material rewards and social approval of ‘machismo’ and/or of skill in fighting. Intraindividual processes of self-image enhancement and/or of the strengthening of psychodynamic defenses may be equally or more important. For some people, stimuli associated with aggression may become secondary rewards by being conditioned to more primary rewards; certain personality types and past histories are predictive of increased attack when pain cues are elicited from the victim (for review, see Berkowitz, 1974; see also Toch, 1969; Zimbardo, 1969; Wheeler & Caggiula, 1966; Swart & Berkowitz, 1976). In other individuals, aggression-induced feelings of pleasure may be masked by guilt and aggression-anxiety (Potegal, 1979).

Some combination of these and other processes may account for the extremes of ecstatic violence described in anthropological and historical sources, e.g. the ‘battle-joy’ of the Viking berserkers, of Andaman islanders, and of Malaysian, African, and American Indian groups in which fear apparently vanished and the warrior was seized with a feeling akin to joy (Kennedy, 1971; Storr, 1972; Zimbardo, 1969; Dentan, 1968).

Extended rituals involving vigorous dancing, chanting, and strong social approval, if not ‘contagion’ of aggression (e.g. Wheeler & Caggiula, 1966), appear to be a necessary preparation
or accompaniment in some of these cases. Repetitive, protracted, violent attack has been reported to lead to similar ecstatic states in contemporary accounts of military violence in Vietnam (Zimbardo, 1969) and of civilian violence in Columbia (Leon, 1969).

Such reports are reminiscent of the well-known phenomenon of ‘amok’, occurring among certain ethnic groups in Malaysia, Indonesia, and the Philippines (Schmidt, Hill & Guthrie, 1977; Burton-Bradley, 1968). In fact the historical allusions to ‘amok’ suggest that, a century or more ago, ‘amok’ may have been similar to the instances described above: a state of high aggressive motivation induced through social contagion as a preliminary to pirate raids (Galloway, 1923) or to warfare (Murphy, 1973).

Some psychiatrists have suggested that ecstatic violence may be similar or equivalent to sexual pleasure and orgasm (Novick & Novick, 1972; Miller & Looney, 1974; Fornari, 1975). Although it has been found that strongly, but not weakly, erotic stimuli can nonspecifically facilitate aggression (Donnerstein, Donnerstein & Evans, 1975; Zillman & Sapolsky, 1977), the biological origins of ecstatic violence should probably be sought in the reinforcing value of aggression, not sex. In special circumstances in which social prohibitions and internal inhibitions (e.g. aggression-anxiety) are weakened, a response which is intrinsically reinforcing and which facilitates its own motivation must produce a positive feedback of the kind observed in ecstatic violence. Ecstatic violence may be the human equivalent of the warm-up and priming effects seen in other animals. According to this hypothesis, cultural sanctions determine the circumstances of the attack, the weapons selected, and the victims initially chosen. Once the attack is set in motion, intrinsic biological mechanisms become more important in determining the ultimate outcome (Zimbardo, 1969).

The form of extreme overtly homicidal aggression experienced personally by the largest number of people is war. Most soldiers are conscripted; under such conditions of low aggressive motivation and realistic evaluation of danger, fear is the most commonly reported emotion in battle. As in the laboratory experiments with nonhuman animals described above, special circumstances must occur to unmask the positive reward value, if any, of aggression: “Certainly... easy killing ‘in battle’ does seem to generate in human beings symptoms of pleasure..” (Keegan, 1976). The development of high aggressive motivation which overcomes fear can, apparently, have a similar effect. The weight of the evidence suggests that overtly homicidal aggression becomes strongly positively reinforcing for the majority of humans only under special conditions of high aggressive motivation and low inhibition (Potegal, 1979), However, wars are not products of personal aggression, although individual acts in the course of war may be triggered by certain immediate conditions tapping into a possibly ‘biologically programmed’ source of aggressive behavior. War does not result from the outpouring of individual aggression, whether instinctual or not (Nelson, 1974; cf. van Doorn & Hendrix, 1970).

**Aggression and the Problem of Reification**

Durant (1980) presented an exposé of the ‘Beast in Man’ theme running through Western cultural history. In this he touched upon the reification of aggression. “Whether it is Darwin discussing ‘the devil under form of baboon’, Freud contemplating the biogenetic origins of
human warfare, MacLean hunting for the ‘paranoid streak’ in man, or Tiger developing ‘an almost medical conception of aggressiveness as epidemic, contagious and anti-vital’ (Tiger, 1973), the idea of the beast in man always treats aggression as a natural entity. However, it is not only anthropologists who are aware of the weakness of this approach: ‘If I say that there are many kinds of mammals’, writes the zoologist Anthony Barnett (1977) ‘I refer to a distinct category, that of hairy vertebrates. There is no such clearly defined category which matches all the usages of aggression’. But how could clearly defined category of aggression exist, when the term plays such an active part in everything from sports commentaries to international politics? To talk of aggression taking a great variety of forms, of its being directed and displaced, inhibited and modified, is inevitably misleading, since it portrays aggression as a thing rather than as a concept used to describe an enormous variety of particular human (and by extension, animal) relationships.

Those who object to the treatment of aggression as a natural entity are not simply taking sides in the well-worn nature/nurture debate. The question at issue is not man as a victim of internal compulsions (genes, drives, instincts, etc.) versus man as a victim of external compulsions (learning, environment, etc.), but rather the hypostatization – in Marxist terms, the reification – of aggression as a category of behavior natural to man versus its interpretation as a dimension of culture with specific personal, social, and political significance. It is this issue which the anthropologist Marshall Sahlins (1977) has in mind when he objects to certain forms of human sociobiology in the following rather caustic terms: ‘To attribute any or all human wars, dominance hierarchies or the like to human aggressiveness is a kind of bargain made with reality in which the understanding of the phenomenon is gained at the cost of everything we know about it’. To some extent Sahlins is tilting at windmills here, since it is quite common to find biologists conceding that warfare requires a cultural rather than a natural explanation. However, it is much rarer to find adequate recognition of what this concession implies. For what is so special about war that separates it from all other forms of human activity, and where will we draw the line once we have admitted the necessity for cultural analysis here? If war is not a natural phenomenon, then neither is a riot, or a street-fight, or murder, or squabbling. It is not that these phenomena are unique to man (they may or may not be, but this is irrelevant), nor that they are independent of the human capacity for hostility and violence (which is manifestly absurd), but rather that they are all equally cultural phenomena which require to be understood in terms of the perceptions, beliefs, and social relations of those involved” (Durant, 1980).