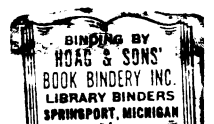


AGGRESSION IN BLACK AND WHITE  
CHILDREN AS PROJECTED IN  
THE DRAW-A-PERSON TEST

Thesis for the Degree of M. A.  
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## ABSTRACT

### AGGRESSION IN BLACK AND WHITE CHILDREN AS PROJECTED IN THE DRAW-A-PERSON TEST

By

Hugh E. Jones

The present study, which is based on the assumption that frustration leads to aggression but accepts the tenability of other theories of aggression, examines the effect of such frustrating conditions as racism and poverty upon the degree of aggressiveness in children as reflected in the Draw-A-Person test. It was hypothesized that black subjects would show more aggression than white subjects; that lower-class subjects would show more aggression than middle-class subjects, and that the groups would assume the following rank of least aggression to greatest aggression: white middle-class, black middle-class, white lower-class, black lower-class.

The subjects included seventy-two fourth and fifth grade male students--thirty-two black and forty white. Socio-economically, there were twenty white middle-class subjects; twenty white lower-class subjects; sixteen

black middle-class subjects, and sixteen black lower-class subjects. A measure of the relative degree of aggression of each subject was obtained through the use of eleven graphic indices of aggression in the drawing of the human figure identified by Machover (1949), Buck (1948), and Koppitz (1968). Each drawing was scored for the number of indicators present.

Statistical analysis demonstrated that neither race, social class, nor the interaction of race and social class were significantly related to the subjects' aggressiveness as projected in the D-A-P test. Trends in the data suggest that race may be related to the level of aggressiveness in that blacks consistently received greater mean scores of aggression than whites. The effect of social class is equivocal.

Serious questions are raised about the reliability of utilizing specific graphic indices of the Draw-A-Person test as a measure of aggression. A global or "intuitive" approach is recommended.

Further investigation of the causes of aggression, techniques for measuring it, and methods of controlling it are suggested. Specifically, the need for further study

of the functional relationship between aggression and assertiveness (Feshbach, 1970) and the determination of aggression behavior as a group influence are indicated.

AGGRESSION IN BLACK AND WHITE CHILDREN AS  
PROJECTED IN THE DRAW-A-PERSON TEST

By  
Hugh E. Jones

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## INTRODUCTION

Man's record of aggression and violence spans human history and holds compelling prominence in our twentieth century culture. Aggression has been considered from a number of viewpoints--some of which will be discussed below. These various approaches may be included under the rubrics of psychoanalytic theory and learning theory--two theoretical notions about the cause and character of aggressive behavior that have dominated twentieth century psychology.

## REVIEW OF LITERATURE

### Psychoanalytic Theory

Freud (1922), in his early writings, considered aggression to be of sexual origin and directed towards "the overpowering of the sexual object in so far as the carrying out of the sexual act demands it" (Ibid., p. 69). He equated aggression with hate and with the destructive impulse--as well as a normal component of the instinct of sex. Recognizing the difficulty of the foregoing assumption that the sadistic impulse (which aims to injure) could derive from life-sustaining Eros, Freud developed his hypothesis of a Death instinct, which represents the organism's wish to return to the state of nothingness from which it came. According to this view, aggression is an expression of the death instinct, and its primary aim is self-destruction. In each individual's life, there is a struggle between life and death instincts. The stronger the death instinct in a person, the more necessary it is for him to direct aggression outward against objects and



people. Aggression that is not directed against others is turned against oneself.

The treatment of aggression among major psychoanalytic theorists is variable. Many question the death instinct construct, but most accept the reactive character of human aggression. Waelder (1956) takes a position typical among Freudian analysts in accepting the validity of both reactive and instinctive sources of aggression. The neo-Freudian position elaborated by Lowenstein (1948) and Hartman, Kris, and Lowenstein (1949) concurs with Freud's assumptions regarding the instinctual origin of aggression. They differ from Freud who interpreted outward aggression as a manifestation of the death instinct, however, for they view self-destructive behavior as a deflection of aggressive impulses. They also suggest that the destructive function of aggressive energy can become modified through neutralization and sublimation.

Among non-Freudian psychoanalysts, the status of aggression is equally variable. For Fromm (1941), the sadomasochistic personality pattern represents a means of reducing feelings of powerlessness and alienation from the social structure. Horney (1945) rejects both aggressive and death instincts. She considered aggression as

one fundamental response used by the child to cope with "basic anxiety," the feeling a child has of being isolated and helpless in a potentially hostile world. Horney differentiates reactive aggression which intends to injure and reactive aggression which is basically instrumental.

### Learning Theory

Learning theory, while not denying the possible biological underpinnings of aggression, stresses the importance of experience (i.e., learning) in the causation and mode of expression of aggression. This is exemplified by the Yale studies of aggression (Dollard et al., 1939). The Yale group postulated that aggression is always a consequence of frustration. More specifically, they indicated that the occurrence of aggressive behavior always presupposed the existence of frustration and, conversely, that the existence of frustration always led to some kind of aggression.

The Yale group offered the following operational definitions of aggression and frustration:

- 1) Aggression is "a sequence of behavior whose goal response is the injury of the person to whom it is directed";
- 2) Frustration is "an interference or blocking of a behavioral sequence that prevents the goal response from occurring" (Ibid., pp. 6-11).

These theorists also hypothesized the following:

- 1) The stronger the instigation to the frustrated response, the more the frustration is an instigation to aggression.
- 2) The greater the interference with a frustrated response, the stronger the instigation to aggression. A minor interference is less frustrating than a complete blocking.
- 3) Frustration accumulates. Minor frustrations add together to produce an aggressive response of greater strength than would normally be expected from the frustrating situation that appears to be the immediate antecedent of aggression.

The immediate reaction to Dollard's assertion that aggressive behavior always presupposes the existence of frustration and that the existence of frustration always leads to aggression was negative. Miller (1941), one of the Yale group, considered the assertion that the occurrence of aggression always presupposes frustration as defensible, but he recognized the following difficulties with the assertion that the existence of frustration always leads to some form of aggression: 1) It suggests that frustration has no consequences other than aggression; 2) It fails to distinguish between instigation to aggression and the actual occurrence of aggression. Miller attempted to remedy this situation by making the following reformulation: "Frustration produces instigations to a number of different types of responses, one of which is an instigation to some form of aggression" (Ibid., p. 342).

It has been demonstrated that frustration often does increase the probability of an aggressive response. Otis and McCandless (1955) report increased aggression following mild repeated frustration of nursery school children. Increases in doll play aggression in both boys and girls were found by Hartup and Himeno (1959) in pre-school children following social isolation. A number of

other studies utilizing diverse techniques for assessing aggression have found increases in aggressive tendencies following frustration (Miller & Buhelski, 1948; Moore, 1964; Mallick & McCandless, 1966). Negative evidence of the frustration-aggression hypothesis is reported by Frederickson (1942), Burton (1942), and Yarrow (1948). Jegard and Walters (1960) failed to find an increase in aggression following frustration in nursery school children.

### Reinforcement and Punishment

A number of behavior theories question the inevitability of aggression as the sole response to frustration, but others have gone even further, questioning frustration as the necessary antecedent condition to aggression. Reinforcement and modeling have been presented as alternatives.

Buss (1961) who exemplifies the reinforcement position, argues that frustration is not a very potent antecedent to aggression. According to his view, aggression occurs primarily if it has instrumental value--i.e., if the individual gets what he wants by an aggressive act.

Berkowitz, a current proponent of the frustration-aggression hypothesis (1962), counters that the deprivation of some object or goal which the individual attempts to obtain by aggressive behavior is in itself a frustration. Reinforcement theorists hypothesize that the child who is rewarded for aggressive behavior in a given situation will tend to respond aggressively in similar situations, and the child who is punished for such behavior will develop anxiety about its expression and will tend not to react with aggression in similar situations (Mowrer, 1939). These formulations have been empirically tested. The effect of reward for aggression on subsequent aggressive behavior has been demonstrated in a number of laboratory studies with children. Davitz (1952) found that an aggressively trained group behaved more aggressively after frustration than a constructively (non-aggressively) trained group. A number of studies have demonstrated that it is possible to shape aggressive responses using a variety of reinforcers (Lovaas, Baer, & Bijou, 1963; Walters & Brown, 1963).

The effect of punishment as an inhibitor of aggression has been demonstrated in the laboratory with animals (Kahn, 1951; Scott and Marston, 1953; Seward, 1946). Also,

Chasdi and Lawrence (1955) demonstrated that nursery school children who were punished for aggressiveness during initial play sessions exhibited significantly less aggression during later sessions than children who received no punishment. Punishment is defined here as "a reduction of the future probability of a specific response as a result of the immediate delivery of a (punishing) stimulus for that response" (Azrin & Holz, 1966, p. 381).

Survey studies of the effect of punishment as an inhibitor of aggression have varied in their results. Lesser (1952) found some indication that punishment for aggression as reported by parents was associated with the inhibition of aggression, whereas reward for aggression was associated with increased aggression. Other survey studies of child-rearing practices have failed to find the predicted relation between increased punishment and lowered aggression (Bandura & Walters, 1959; Glueck & Glueck, 1950; Sears et al., 1957). In terms of their findings, Sears and his colleagues concluded that punishment is "ineffec-  
tual over the long term as a technique for eliminating the kind of behavior toward which it is directed" (Ibid., p. 484).

Identification (Modeling)

The modeling theorists stress the importance of observational learning in the acquisition of aggressive behavior. They postulate that a situation in which an individual observes another perform an aggressive response has a strong influence on the learning of aggressive responses. The response may be an exact imitation of a non-identical behavior in the same class as that observed. Modeling is more effective when the observer has been previously instigated to aggress (Berkowitz, 1965) and when the observer sees the model being reinforced (Bandura, Ross, & Ross, 1963; Rosenbaum & Tucker, 1962; Walters, 1966). The power status and other stimulus qualities of the model have also been found to be important conditions of the effectiveness of modeling (Epstein, 1966; Hicks, 1965; Lefkowitz, Blake, and Mouton, 1955).

Observational learning (imitating a model) is considered to be relevant to Freud's concept of identification. Freud (1923) developed this concept to help account for the continuity in children of the values, desires, and manners of their same-sex parent. Freud designated two processes--anaclitic identification in which a child

acquires attributes of the loved parent and identification with the aggressor, in which a child defends against anxiety by taking on the attributes of a punitive parent (A. Freud, 1937). According to Sears, Rau, and Alpert (1965), the relevance of modeling to identification is that the child, "by performing certain acts which, in the mother's behavior repertoire, have become secondary rewards or reinforcers for the child, now has a mechanism by which he can reward himself. By imitating his mother, he can provide a substitute for her when she begins withdrawing affectionate interaction and nurturance from him" (p. 4).

### Socio-Cultural Variables

A number of investigators have produced empirical evidence supporting the position that aggression is a result of specific types of social milieu. Parental influence has been identified as an important variable. McCord et al. (1961) attempted to evaluate a large array of familial factors in the development of aggressiveness among lower-class nondelinquent boys. They found that

aggressive boys were most likely to be raised by parents who (a) treated the boy in a rejecting, punitive fashion; (b) failed to impose direct controls on his behavior; (c) offered him an example of deviance; and (d) were often involved in intense conflicts. Non-aggressive boys came from a decidedly different environment in which they were (a) treated in an affectionate, non-punitive manner; (b) guided by a consistent set of controls; (c) exposed to examples of social conformity; and (d) reared by affectionate, satisfied parents.

McCord's findings were similar to those of Sear, Maccoby, and Lewin (1957) who, from carefully executed interviews with 379 New England mothers, concluded that aggression in small children (defined as "behavior intended to hurt or injure someone") was associated with such environmental factors as parental permissiveness for aggression, the use of physically punitive discipline, maternal lack of self-esteem, disagreement between the parents, and dissatisfaction on the mother's part with her role in life.

Chasdi and Lawrence (1955) investigated the effects of home frustration, home and experimental punishment, and experimental permissiveness on the frequency and intensity

of aggressive doll play behavior of fifty-three nursery school children. Their findings include the following:

- 1) Children who are severely frustrated by their mothers at home tend to be more aggressive in their doll play than children who are mildly frustrated.
- 2) Children who are highly punished for aggression at home tend to be more aggressive in doll play than non-punished children.

Also, the punished group decreased in doll play aggression and the permissive group increased in doll play aggression.

### Poverty

Michael Harrington (1963) defines the poor as "those who for reasons beyond their control cannot help themselves." The door to opportunity and advancement is closed to them. They are victims in a "vicious circle of poverty" (Ibid., p. 22).

Hess (1970) described the following circumstances of lower working-class life in metropolitan society:

- 1) The economic poverty of families in urban slums is the most visible and pervasive feature of life. In 1964, roughly one-sixth of the population of the United States had family incomes of \$3000 or

less or individual incomes of \$1500 or less (Keyserling, 1964).

- 2) Powerlessness is one of the central problems of the poor. They are more likely to be arrested without justification and detained without adequate regard for individual rights. Health services are often inferior although not substantially less expensive. In many areas of their lives, the poor have difficulty defending themselves against invasions of privacy, i.e. welfare agents.
- 3) Related to these conditions of poverty and powerlessness is a vulnerability to disaster. Typically the poor are not only without financial reserves of their own, but they are most likely to be given little advance notice when laid off from work, to be victims of legislative and bureaucratic delay or interruptions of welfare service. They typically possess little credit or borrowing power and are less likely to have friends with resources. Life is lived on the edge of incipient tragedy which they are powerless to avert.

- 4) The circumstances of life of the poor combine to restrict the range of alternatives of action available to them. Lack of economic resources, lack of power, lack of education, and lack of prestige greatly reduce physical mobility and the opportunity for different options concerning areas of residence, housing, employment, and most areas of their lives.
- 5) The poor are without status and prestige in the society. They are aware of their position in society, and this awareness is probably transmitted to children directly through their own observations and indirectly through adults who define for their children their relative position in the community.
- 6) The poor have few experiences in common with the upper working-class or the middle-class. Although there is sufficient contact and visibility to make the poor aware of the values of the middle-class, their range of experience is quite different.

A number of studies have examined the socialization practices directly related to aggressive responses of middle- and lower-class parents. Bandura and Walters (1959)

and Sears et al. (1957) found a relationship between parental permission of aggression and the child's aggressive behavior. In each case, mothers of aggressive boys were found to be significantly more permissive of aggression. Many lower-class mothers encourage aggression against other children, believing that a child must learn to take care of himself. Kenneth Clark (1963) observed that lower-class children are more likely to react aggressively since aggressive patterns of behavior are part of the struggle for survival within the lower-class pattern of living.

Allinsmith (1954) found that middle-class parents typically used psychological punishment while the punishment of lower-class parents was predominantly physical. Physical punishment led to more aggression than psychological punishment. Furthermore, physical punishment led to direct aggression against authority while psychological punishment led to indirect aggression against authority.

### Racism

Racist practices continue to be a source of constant frustration to the black man in America. Harrington described the black man's predicament in the following:

The Negro is poor because he is black; that is obvious enough. But perhaps more importantly, the Negro is black because he is poor. The laws against color can be removed, but that will leave the poverty that is the historic and institutionalized consequence of color. As long as this is the case, being born a Negro will continue to be the most profound disability that the United States imposes upon a citizen (1963, p. 73).

Unlike the young white immigrant of several generations ago, the black child does not find society as open to him. Instead, White America keeps the black man down. "It forces him into slums and the dirtiest, lowest paying jobs; it theorizes about him and stereotypes him as lazy, shiftless, and irresponsible. The consequence is heart-breaking frustration" (Ibid.).

Kenneth Clark indicates that blacks as a group are subject to more general conditions of social isolation, rejection, and frustration than any other group in America.

Robert Coles (1964) reports that the late 1960's brought improved self-esteem and constructive channeling outward in black children. The writer's own experience support this view. There seems to be more encouragement among blacks to express aggression openly--not to squelch it as the writer, like most blacks, was taught as a child.

Coles quotes a black mother who stands in awe of her nine-year-old son's angry denunciation of white people and her five-year-old daughter's equally vehement words and feelings. She says that her children tell her:

We've got to keep pushing, and we can't let "the white" beat on us no more, and we should go across town (Boston) and tell them to give us what we should have been having three hundred years ago: (p. 7).

The son called his mother a "Black coward" when she tried to silence him. The mother describes her own Southern upbringing--a striking contrast to her children's words:

My mother, she used to tell us kids we shouldn't even let ourselves know what we are thinking and wanting. And even in Church, she'd say we should be careful what we pray for, because you never can tell, you can get in trouble for being "uppity" even if you look "uppity" when you come out of Church. The white man, he'll see you and tell you, "Nigger, you look too smart" (Ibid., p. 50).

Clark also observes the tendency of young blacks to refuse to assume the meek, unaggressive role which in the past had been stereotypic of blacks in their relationships with whites. Young blacks have accepted the same goals as whites and are demanding the immediate attainment of these goals rather than in the future. Their methods for attaining these goals are typically American--based

on competition and aggressive assertion of individual worth rather than meekness and subservience.

Clark contends that middle-class black children are trained to control their impulses, to adhere to demands of respectability, and to avoid negative contact with whites. Direct expression of aggression, overt violence, or anti-social behavior is discouraged.

Margaret Brenman (1940) investigated the effects of social class on the personal adjustment of Negro girls. She found that lower-class black girls gave more open expression to aggressive feelings in their relationships with whites. Middle- and upper-class black girls resembled white girls in that they accepted the same restraints and social demands which they thought would give them higher social status.

#### Hammer's Study

Hammer (1953) extended the frustration-aggression to socio-racial areas by testing the relative degree of aggression in 148 black children and 252 white children attending grades one through eight in Virginia. No attempt was made to control socio-economic level since few blacks

in Virginia were of comparable socio-economic level as whites. In this study, frustration was defined as the thwarting or blocking of an individual's significant drives, motives, and needs. Also, Maslow's (1941) theory that frustration consists of deprivation and personality threat was used. Hammer assumed that the black child suffered more frustration than the white child as defined by the criteria of deprivation and personality threat. He used the House-Tree-Person Test, a projective technique, to tap the presence of aggression. A number of qualitative indicators of aggression were developed. Based on the number of indicators present in a drawing and the judge's clinical impression, the drawings were rated on an aggression scale of zero to two. A rating of zero represented no apparent aggression or hostility; a rating of one represented mild aggression and hostility, while a rating of two represented severe aggression and hostility. The mean aggression and hostility rating for white children was .308 while that of black children was .823. Thus, white children proved to be closer to the point of no apparent aggression and hostility while black children scored closer to the point of mild aggression.

### Hypotheses

The present study is a modified replication and expansion of Hammer's study. Like Hammer's study, the primary assumption underlying this study is the notion that frustration leads to aggression. This emphasis upon the frustration-aggression hypothesis, however, is not to negate the tenability of the various other antecedents of aggression that have been discussed above. Regardless of the tenability of any of these approaches, there is plenty of evidence that a number of factors related to poverty and racism act as strong instigators to aggression. The present project attempts to assess groups where such alleged conditions exist and to use the Draw-A-Person test, a projective technique, to determine the relative degree of aggression as projected in the DAP of children of differing racial and socio-economic backgrounds who are subjects of racial discrimination and poverty. The present study expands Hammer's by examining social class differences in the degree of aggressiveness as projected in the DAP and by controlling for age, sex, and grade.



Hypothesis 1

A black child growing up in white America finds the world to be hostile and threatening--full of disappointment and frustration. The discrimination and inequalities he experiences often cause him lifelong, inescapable frustration. One reaction to this frustration is aggression. Because they experience strong instigators to aggression associated with racial discrimination:

- 1) Black children will show significantly more aggression than white children.
  - a. Black middle-class children will show significantly more aggression than white middle-class children.
  - b. Black lower-class children will show significantly more aggression than white lower-class children.

Hypothesis 2

Poor housing, inadequate health services, economic deprivation, feelings of helplessness and hopelessness, and other conditions associated with poverty serve to produce considerable frustration. Children growing up amidst such conditions are highly frustrated. Because they experience strong instigators to aggression associated with poverty:

- 2) White lower-class and black lower-class children will show significantly more aggression than white middle-class and black middle-class children.
  - a. White lower-class children will show significantly more aggression than white middle-class children.
  - b. Black lower-class children will show significantly more aggression than black middle-class children.

Hypothesis 3

The group mean scores of aggression will assume the following rank in order of least aggression to most aggression:

- 3)
  - a. white middle-class--least aggression
  - b. black middle-class
  - c. white lower-class
  - d. black lower-class--most aggression

Black lower-class children will show the most aggression because they are subjected not only to instigators to aggression related to racial discrimination but also to instigators associated with poverty.

## METHOD

### Sample

The sample consisted of a total of seventy-two 4th and 5th grade male students in a large midwestern school district. Forty of the subjects were white and thirty-two were black. Socio-economically, there were twenty white middle-class and twenty white lower-class; sixteen black middle-class and sixteen black lower-class subjects. Socio-economic status was determined by parental occupational information provided by classroom teachers. For the most part, the middle-class sample attended a school on the city's northwest side. This school is fairly well racially integrated (about 25-30% black) and is considered a highly desirable educational setting by both black and white parents. Children of a number of local and state governmental employees attend this school including the children of the city's mayor. The parents of the middle-class subjects held professional and technical jobs. Typical parental occupations of these subjects include the following: teaching--elementary,

secondary, and university; medicine--physicians and nurses; social work; management; architecture; pharmacy, computer programming, map making; government; engineering; educational administration; insurance, and personnel. White middle-class parents tended to hold higher-level, more prestigious jobs than parents of black middle-class subjects.

The lower-class subjects attended a school located on the south side of the city. The school is located in an area recently annexed to the city and serves a population of blacks, whites, and Spanish-Americans, many of whom moved to the area after being displaced by urban renewal projects. This school was formerly a small "country" school, but its enrollment has increased four-fold as a result of several housing projects built recently in the area. Typical parental occupations of these subjects include such semi-skilled and unskilled jobs as the following: custodial, cooking, security, service station attending, manual labor, domestic work, and factory production work. A sizable number of these subjects were from one-parent homes where the family received support from public funds.

These schools were chosen for the study because both were racially integrated and thus had a significant number of blacks as well as white students and because both schools served rather homogeneous socio-economic groups. All of the fourth and fifth grade classes in each of the schools participated in the study.

### Instrument

The Draw-A-Person or Human Figure Drawing, a projective technique described by Machover (1949) and others was used in the study because of its similarity to the House-Tree-Person projective technique utilized by Hammer. The Draw-A-Person requires the subject to make a drawing of a person. It is generally accepted that in drawing the human figure, a person projects his own physical aspects as well as his psychological self. The adaptability of this technique for group administration made it quite appropriate for the present study. Specific graphic indices of the DAP have been found to be predictors of aggression.

Procedure

The Draw-A-Person was administered by the writer to four entire fourth and fifth grade classes at the west side school containing a total of approximately 120 students and three intact fourth and fifth grade classes at the south side school containing approximately 90 students. Each student in the seven classrooms involved was given a sheet of paper size 8-1/2" x 11" and a number two pencil with an eraser. The following instructions suggested by Koppitz (1968) were given: "On this piece of paper, I would like you to draw a WHOLE person. It can be any kind of a person you want to draw, just make sure that it is a whole person and not a stick figure or a cartoon figure." Subjects were permitted to ask questions in order to clarify the directions. They were also instructed to put their name, age, and grade on the back of the drawing.

While the subjects were drawing, teachers made lists of all the children in their classroom present that day and provided information regarding the racial identity and parental occupation or source of income of each of their students. Drawings of children for whom economic status could not be determined were not used in the study.

Upon receiving the drawings, the writer assigned codes, identifying the subjects racially and socio-economically. The codes used were devised by the writer and were not known to any other person.

A total of 210 drawings were collected. Of this number, approximately 110 of them were drawn by female students and therefore were not used in the study. An additional twenty-five drawings could not be used for various reasons, e.g. child did not follow directions. Thus, a total of seventy-two drawings were suitable for use in the study.

The following graphic indices of aggression and hostility, some of which were utilized by Hammer and others which were identified by Koppitz (1968), Machover (1949), and Buck (1948) were used to assess the presence of aggression in the subjects' drawings.

- (1) Poor integration of parts--one or more parts not joined to the rest of the figure, part only connected by a single line or barely touching. Poor integration appears to be associated with impulsivity.
- (2) Gross asymmetry of limbs--one arm or leg differs markedly in shape from the other arm or leg. This item is not scored if arms or legs are similar in shape but just a bit uneven in size. Koppitz found this item to occur frequently in drawings of aggressive children.

- (3) Teeth--any representation of one or more teeth. Koppitz, Machover, and Hammer consider the presence of teeth to be related to overtly aggressive and possibly sadistic behavior.
- (4) Long arms--arms excessively long, arms long enough to reach below the knee or where the knee should be. Koppitz and Buck found that long arms reflected externally directed, aggressive needs, an aggressive reaching out into the environment.
- (5) Big hands--hands as big or bigger than the face of the figure. Big hands seem to be associated with aggressive and acting-out behavior involving the hands, either directly as in overt aggression, or indirectly, as in stealing.
- (6) Genitals--realistic or unmistakably symbolic representation of genitals. Koppitz found this item to be rare in children's drawings, but when it did appear, it was invariably in the drawings of overtly aggressive children. The presence of genitals or symbols suggest poor impulse control.
- (7) Sharply pointed fingers or toes--spear or talon-like fingers. Buck found this item to reflect aggressive tendencies.
- (8) Sharply squared shoulders--shoulder line a straight line or at least one angular shoulder. According to Buck, this item connotes over-defensive, hostile attitudes.
- (9) Arms drawn folded across the chest--suggests attitudes of suspicion and hostility.
- (10) Person carrying weapons such as guns, swords, black-jacks, etc. Buck and Hammer found that the presence of weapons in the drawing reflected aggressive and hostile tendencies.
- (11) Drawings made conspicuously too large for the page--without adequate page space framing them (particularly when they touch or almost touch the page's side

margins), tend to indicate a feeling of frustration produced by a restraining environment, with concomitant feelings of hostility and a desire to react aggressively either against the environment, the self, or both.

Two coders trained by the examiner scored the drawings for the presence or absence of each of the above-described indicators of aggression. They were not aware of the race or socio-economic status of the subjects whose drawings they scored. The drawings were distributed randomly between them. On two pretesting trials in which each coder scored five drawings of children not included in the study, there was a 80 and a 100 percent of agreement in Trials I and II, respectively. If an indicator were present in a drawing, a score of one (1) was assigned; if the indicator was not present, a score of zero (0) was assigned. Each subject, therefore, received a score of zero to eleven.

## RESULTS

Since there were eleven (11) indicators of aggression, each subject could potentially receive a total aggression score of zero to eleven. However, in the data, the scores ranged only from zero to three with an overall mean score of .51. No indicators of aggression were found in 57% of the drawings.

A two-way analysis of variance was used to determine the effect of race, socio-economic status, and the interaction of race and socio-economic status upon the relative degree of aggression of each subject. The failure of the indicators of aggression to appear in the drawings and the lack of variance among the total aggression scores of the subjects caused the differences among them to be statistically non-significant (Table 1). No statistically significant differences were found among any of the variables.

TABLE 1  
SUMMARY OF ANALYSIS OF VARIANCE RACE AND  
SOCIO-ECONOMIC STATUS

| Source                    | SS    | df | MS   | F     |
|---------------------------|-------|----|------|-------|
| Race                      | .89   | 1  | .89  | .4263 |
| Social Class (SES)        | .356  | 1  | .356 | .17   |
| Race & Social Class       | .178  | 1  | .178 | .085  |
| Subj./Race & Social Class | 8.36  | 26 | 2.09 |       |
| Total                     | 9.784 | 29 |      |       |

### Hypothesis One

Hypothesis One that black subjects would show significantly more aggression than white subjects was not supported. However, visual examination of mean differences in Table 2 show that the data were in the direction of the hypothesis. The mean score for blacks is .63 while that of whites is .425. Fifty percent (50%) of all black subjects had at least one indicator in their drawings while thirty-five percent (35%) of all white subjects had at least one indicator (Table 3). The data are also in the direction of the two sub-hypotheses that black

TABLE 2

MEAN AGGRESSION SCORES--RACE AND  
SOCIO-ECONOMIC STATUS

| Race               | Middle | Lower | Total Race |
|--------------------|--------|-------|------------|
| Black              | .70    | .56   | .63        |
| White              | .40    | .45   | .425       |
| Total Social Class | .53    | .50   |            |

TABLE 3

DISTRIBUTION OF S's WHO HAD AT LEAST ONE  
INDICATOR IN DRAWING

|           | Lower |        | Middle |       | Total Race |      |
|-----------|-------|--------|--------|-------|------------|------|
|           | Pos.* | Neg.** | Pos.   | Neg.  | Pos.       | Neg. |
| Black     | 7     | 9      | 9      | 7     | 16         | 16   |
| White     | 7     | 13     | 7      | 13    | 14         | 26   |
| Total SES | 14    | 22     | 16     | 20    |            |      |
|           |       |        |        | Total | 30         | 42   |

\*Pos. indicates number of subjects who had indicators in drawings.

\*\*Neg. indicates number of subjects who did not have indicators in drawings.

middle-class subjects (mean .7) would show more aggression than white middle-class subjects (.4), and that black lower-class subjects (.56) would show more aggression than white lower-class subjects (.45).

### Hypothesis Two

Hypothesis Two that lower-class subjects would show significantly more aggression than middle-class subjects was not supported. In fact, an examination of mean scores in Table 2 reflects almost equal means for both the middle- and lower-classes, .53 and .50, respectively. Forty-four percent (44%) of all middle-class subjects had at least one indicator of aggression in their drawings while thirty-nine (39%) of all lower-class subjects had at least one indicator. The data were in the direction of the sub-hypothesis that white lower-class subjects (.45) would show more aggression than white middle-class subjects (.40), but mean scores were not in the direction of the hypothesis that black lower-class subjects (.56) would show more aggression than black middle-class subjects (.70).

### Hypothesis Three

Hypothesis Three that the group mean scores would assume the following rank order of least aggression to most aggression: white middle, black middle, white lower, and black lower--was not supported. An inspection of means in Table 2 reveals the following order of least to greatest aggression: white middle, white lower, black lower, and black middle.

### Additional Findings

One of eight of the eleven indicators of aggression was present in at least one drawing (Table 4). Three of the indicators did not appear in any drawings. A total of 37 indicators appeared in the 72 drawings (mean .51). Indicators appeared in 31 or 53% of the drawings. Teeth and sharply squared shoulders were the most frequently appearing indicators. Teeth appeared in eleven drawings and sharply squared shoulders were present in ten drawings.

TABLE 4

## FREQUENCY OF AGGRESSION INDICATORS

| Indicator                           | BM | BL | WM | WL | Total |
|-------------------------------------|----|----|----|----|-------|
| Poor Integration of Parts           | 0  | 1  | 0  | 0  | 1     |
| Gross Asymmetry of Limbs            | 2  | 0  | 0  | 0  | 2     |
| Teeth                               | 2  | 3  | 4  | 2  | 11    |
| Long Arms                           | 0  | 0  | 0  | 0  | 0     |
| Big Hands                           | 0  | 0  | 0  | 0  | 0     |
| Genitals                            | 0  | 0  | 0  | 0  | 0     |
| Sharply Pointed Fingers<br>and Toes | 0  | 2  | 0  | 2  | 4     |
| Sharply Squared Shoulders           | 4  | 1  | 2  | 3  | 10    |
| Arms Folded Across Chest            | 1  | 0  | 0  | 1  | 2     |
| Person Carrying Weapon              | 2  | 0  | 1  | 0  | 3     |
| Person Conspicuously<br>too Large   | 0  | 3  | 1  | 0  | 4     |

## DISCUSSION

The lack of significant results in the present study may be attributed largely to inadequacies of the instrument used to assess the presence of aggression. Considerable controversy surrounds the use of specific graphic indices in human figure drawings as was done in the present study. Granick and Scheflen (1958) pointed out the difficulty of devising acceptable objective scoring procedures for projective tests. They suggest that it is not feasible to develop an overall statistical reliability of certain aspects. Most investigations of the reliability of specific graphic indices of human figure drawings (Gunderson and Lehner, 1958; Bradshaw, 1952) have used a "percent of agreement" method. Swenson (1957) criticizes this approach, maintaining that percent of agreement and reliability are not the same. The research on the use of specific graphic indices is inconclusive with a number of studies supporting the validity of various graphic indices (Schmidt and McGown, 1959; Budwin and Bruch, 1960; Kamana, 1960; Goldstein and Rawn, 1957)

and other similar studies failing to find significant results (Starr and Marcuse, 1959; Strumpfer and Nichols, 1962).

Guinan and Hurley (1965) and others (Zimmer, 1956; Rosenzweig, 1960; Laane, 1960) criticize the practice of making judgments and interpretations of the DAP based on specific elements. Guinan and Hurley report that research on the DAP has focused on specific variables in the drawings while in clinical settings the test is used to obtain a general impression of personality organization. They conducted a reliability study of the DAP utilizing global impressions as criteria for judgments and found it to be quite reliable when used in this way. They therefore suggest a global or "intuitive" approach to the DAP in research rather than the traditional atomistic approach. Such an approach may have been valuable in the present study since many drawings which gave a very aggressive impression clinically failed to reveal any of the designated indicators. Hammer used the wholistic approach in his study in that he provided judges with criteria of aggression to be used as guidelines, but they exercised clinical judgment to rate the drawings in terms of the degree of aggressiveness.

The most notable finding is the failure of the eleven indicators of aggression to appear in the drawings. Of the possible eleven, the largest number of indicators to appear in a single drawing was three. Most drawings had one or less (total mean--.51). No indicators of aggression were revealed in 57% of the drawings.

The expectation that a greater number of indicators would appear in the drawings may have been somewhat unrealistic. Koppitz (1969) in a comparison of 30 Emotional Indicators in the Human Figure Drawings of 468 4th and 5th grade boys and girls from lower- and middle-class backgrounds found that a little more than one-fourth of them revealed two or more Emotional Indicators in their drawings. Approximately half of the 72 subjects in the present study revealed one or more of the possible eleven indicators of aggression.

The data were in the direction of the hypothesis that blacks would show more aggression than whites. The lack of significance of this hypothesis may be related to the inadequacy of the instrument as a measure of aggression. However, other factors may be operative. It is possible that blacks and whites have equally aggressive fantasy lives, but they may differ in the way they express

it. Blacks, because they have been discouraged in verbally expressing aggression, may act out their aggression in a physical manner whereas whites--especially middle-class whites--may tend to express their aggression more verbally because they are socialized to "talk about their problems." This avenue traditionally has not been an option for blacks because black parents quite early in the child's life, began squelching the expression of verbal aggression which could cause the child to come into conflict with the white majority. He had to learn early to inhibit verbal aggression and to appear passive and docile. This pattern is changing somewhat. There is an increasing recognition among blacks, especially middle-class blacks, of the value of verbally expressing aggression, and such expression is being encouraged.

Another consideration which may account partially for the lack of significant differences in the aggressiveness of blacks and whites is the possibility that there may be in the environments of whites instigators to aggression that are equally as powerful as the racism experienced by the black child.

The data were not in the direction of the hypothesis that lower-class subjects would show more aggression

than middle-class subjects. The lack of significant class differences in the degree of aggressiveness may be due to the sole use of economic circumstances and resources as represented by occupational level as the determinant of socio-economic status. The use of more systematically defined indices of social status as occupation, education, and ecological variables would have been appropriate as well as possible emphasis upon social and psychological features of socio-economic status. The fact that middle-class blacks, in contradiction to the prediction, showed considerably more aggression than lower-class blacks may be related to the fact that the middle-class black subjects, while they were economically more advantaged than the lower-class blacks, lived on the fringe of the west side black ghetto while the lower-class blacks lived about five miles away from the innercity in a recently developed, multi-ethnic area with diverse income levels.

Securing adequate numbers of middle-class black subjects and differentiating them in terms of socio-economic status from the lower class, has been a problem experienced by most investigators of race-related studies. This has been the experience in the present study. There were a number of "borderline" blacks in terms of socio-economic

status. It would have been easier to differentiate blacks socio-economically if the lower-class subjects had been chosen from a more hard-core, inner-city setting. The fact that the data were in the direction of the hypothesis that white lower-class subjects would show more aggression than white middle-class subjects may be due to the more clearly defined class differences between whites than between blacks. The middle-class whites were very obviously at a higher level socially and economically than the lower-class whites.

Social classes, like racial and ethnic groups, may not differ in their aggressiveness but may differ considerably in their expression of aggression. Koppitz (1969), in the study of Emotional Indicators in the drawings of middle- and lower-class children, found that when two groups of students were matched for age, intelligence, and sex, there was "not a single significant difference" between the frequency of occurrence of any of the 30 Emotional Indicators nor for the total number of indicators on each drawing.

According to McNeil (1957), a middle-class child and a lower-class child with equally aggressive fantasy lives may differ considerably in behavior, with the

lower-class child's actions matching his fantasy while the middle-class child inhibits expression of his. Feshbach (1970) in his comprehensive review of the literature on aggression discovered that the data bearing on the relationship between social class background of the child and his aggressiveness were contradictory. He suggested that psychological factors linking social class to aggression such as socialization techniques employed and the degree of frustration and other instigators to aggression experienced by children from different social strata--need to be more systematically investigated. Feshbach contends that there are important differences in the psychological environment of children of each social class. They are not homogeneous groups.

The groups ranked themselves as predicted in order of least aggression to most aggression with the exception of black middle-class who, contrary to prediction, showed more aggression than white and black lower classes. This occurrence may be explained by the problems related to the black middle-class sample previously discussed. Another possible explanation is that there may be a greater incidence of apathy and corresponding less aggression among lower-class whites and blacks while middle-class blacks

have greater expectancies, which when unrealized, create increased frustration and resultant aggression.

The most frequently occurring indicator of aggression was the presence of teeth. This sign was revealed in eleven drawings and was equitably distributed among blacks and whites and middle- and lower-classes. Machover considers mouth detailing with teeth to indicate oral aggression. Griffith and Lemley (1967) found that two signs--teeth and a threatening look--were necessary to permit inference of verbal aggression and that even the presence of both signs was not enough to connote physical aggression. Koppitz (1968), when she determined that teeth occurred most often in the drawings of overtly aggressive children, concluded that teeth are a sign of aggressiveness and not only of oral aggression. Goldstein and Rawn (1957) found that teeth along with seven other specific drawing details were related to aggression. Koppitz, too, discourages the use of one indicator as conclusive. She considers the occurrence of teeth in a human figure drawing to be diagnostically meaningful only if it occurs with other indicators. In the present study, teeth occurred as the only indicator in nine of the eleven drawings in which it appeared. Therefore, the teeth in most drawings

may not necessarily represent aggression, or it may only represent a normal amount of aggression in children necessary for achievement and leadership.

The second most frequently occurring indicator was sharply squared shoulders which according to Buck (1948) connotes overdefensive, hostile attitudes. The emphasis on shoulders may be a way of expressing masculine strivings. Though pre-adolescent, the subjects are concerned about body image. They are approaching that awkward age when they are neither youngsters nor grown-ups. Needless to say, in our society, masculinity is viewed as synonymous with aggression since boys are socialized to be aggressive and girls are socialized to be passive. It would be of interest to compare the occurrence of "sharply squared shoulders" in the drawings of male and female subjects. Because of the favored position of masculinity and the increasing assertiveness of women, differences may be minimal.

Sharply pointed fingers appeared only in the drawings of lower-class children. This may be related to our earlier observation that lower-class children tend to act out their aggression physically while middle-class children may be more verbally aggressive. In line with this thinking,

one would have expected "teeth" to appear more in the drawings of middle-class subjects, but this did not occur.

"Persons carrying weapons" appeared in only three drawings--two black middle and one white middle. With the excessive use of weapons on television, the Vietnam war, and the increasing use of weapons by private citizens for security, one would expect a greater occurrence of this indicator. A common stereotype is that of the lower-class black carrying weapons. In the present study, there were not significant differences between whites and blacks in terms of the presence of weapons in the drawings, and all of the drawings containing weapons were those of middle-class subjects.

In Hammer's study a significantly larger number of black subjects drew persons conspicuously too large for the page than white subjects. Since this indicator had been defined by Buck (1948) as representative of feelings of great frustration produced by a restraining environment with concomitant feelings of hostility and a desire to react aggressively, Hammer interpreted this finding as support for his judgment that black subjects harbor greater feelings of frustration with a desire to react aggressively, than do whites. The data in the present study is in the

direction of Hammer's findings. This sign occurred four times--three times in the drawings of black lower-class subjects and once in the drawing of white middle-class subjects.

Fish and Larr (1972) compared the drawings made by black youngsters during the 1950's with those made by a comparable group of blacks during the 1970's and found that the recent drawings revealed more identifiably black characteristics than those of the 1950's. This phenomenon was attributed to increased black awareness and pride. In the present study, one of the black middle-class (N = 16) subjects and eight (50%) of the black lower-class subjects made identifiably black drawings. The most obvious distinguishing feature in the drawings was the Afro hair style; however, in some cases treatment of the nose and mouth features were also indicative. None of the white subjects made identifiably black drawings. The large discrepancy between middle- and lower-class blacks in the drawing of black features could be related to the possibility that lower-class blacks are more likely to adopt Afro hair styles and to be more overt in their identification with blackness while middle-class blacks may remain more accepting and imitative of white styles and values.

It is generally expected that a person will draw his same-sex first when instructed to draw a person. Of the 72 subjects, 71 of them drew males, and only one drew a female.

An issue of great concern to social scientists, educators, and parents is the control of aggression. Eron (1971) has suggested the following procedures for those persons who want to reduce the aggressive behavior of children. (1) Reduction of the amount of instigation to aggression, i.e. bickering between the parents; criticizing the child; not nurturing the child; (2) Making aggressive models less available to the child--reduce the violence observed by the child on TV, in the parents' disciplinary practices, and in the parents' social and occupational behavior in general. (3) Making non-aggressive models more available to the child--on TV, in disciplinary practices, and in social and occupational behaviors, and (4) Programming the consequences of aggression and of non-aggression so that aggressive behavior will decrease and non-aggressive behavior will increase.

Eron (1971) and Feshbach (1970) raise questions about the ramifications of shaping a child's behavior in such a way as to minimize aggressiveness. In a capitalistic

society such as ours, low aggressiveness may handicap an individual in coping with the socio-economic environment. Our country places a high value on aggressiveness, revering and adulating those who have evidenced this behavior. In this society, low aggressiveness could be economically and psychologically crippling. A non-aggressive male would appear almost as a deviant in our society. On the other hand, questions may also be raised about the consequences of shaping a child's behavior toward aggressiveness. The positive consequence would be the ability to cope in a competitive society. The negative would be a continuation of the pattern of violence that has existed from the inception of the country and continues to exist today as evidenced by rising crime rates and our continued military involvement in Southeast Asia. Eron considers the issue of control to be the major problem of systematically training for aggression. Aggression that is learned, expressed, and rewarded in one setting (like the military) is condemned, considered criminal, and punished in another context.

Feshbach (1970) suggests the need for further study of the functional relationship between aggression and assertiveness. These are generally treated

synonymously during pre-school years but become differentiated by adolescence. Assertiveness is seen as "a behavioral pattern of active coping with environment in the pursuit of one's own needs when confronted with counter-pressure and is distinguished from aggression in that it lacks the painful and destructive consequences of aggression" (Ibid., p. 243). Further exploration is necessary to establish how closely related these two behavior patterns are and to determine how difficult it would be for a child to discriminate reinforcement for assertiveness and aggression.

According to Feshback, insufficient attention has been given to the social context as it contributes to the determination of aggressive behavior as a group influence. Studies to date have focused mainly on individual aggression even though much of human aggression of children and adults occur in the context of a group activity. There is little empirical data that bear on differences in aggression when a child is part of a group compared to when he is acting as an individual. In light of the increased group violence in our society--race riots, violent student demonstrations--it is important to better understand the influence of the group upon aggressive behavior.

Although some very extensive and fruitful empirical studies utilizing a variety of instruments have been done on aggression, there is a need for continued efforts to identify those forces which contribute to aggressive behavior and to formulate methodology for the effective control of aggression. Further study should focus more upon utilizing measures of aggressive behavior rather than predicted or fantasy aggression based on projective techniques.



## SUMMARY

The present study, which is based on the assumption that frustration leads to aggression but accepts the tenability of other theories of aggression, examines the effect of such frustrating conditions as racism and poverty upon the degree of aggressiveness in children as reflected in the Draw-A-Person test. It was hypothesized that black subjects would show more aggression than white subjects; that lower-class subjects would show more aggression than middle-class subjects, and that the groups would assume the following rank of least aggression to greatest aggression: white middle-class, black middle-class, white lower-class, black lower-class.

The subjects included seventy-two fourth and fifth grade male students--thirty-two black and forty white. Socio-economically, there were twenty white middle-class subjects; twenty white lower-class subjects; sixteen black middle-class subjects, and sixteen black lower-class subjects. A measure of the relative degree of aggression of each subject was obtained through the use of eleven

graphic indices of aggression in the drawing of the human figure identified by Machover (1949), Buck (1948), and Koppitz (1968). Each drawing was scored for the number of indicators present.

Statistical analysis demonstrated that neither race, social class, nor the interaction of race and social class were significantly related to the subjects' aggressiveness as projected in the D-A-P test. Trends in the data suggest that race may be related to the level of aggressiveness in that blacks consistently received greater mean scores of aggression than whites. The effect of social class is equivocal.

Serious questions are raised about the reliability of utilizing specific graphic indices of the Draw-A-Person test as a measure of aggression. A global or "intuitive" approach is recommended.

Further investigation of the causes of aggression, techniques for measuring it, and methods of controlling it are suggested. Specifically, the need for further study of the functional relationship between aggression and assertiveness (Feshbach, 1970) and the determination of aggression behavior as a group influence are indicated.

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