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#### ABSTRACT

This study investigated the hypothesis that high level language proficiency is associated with low observable aggression and low language proficiency is associated with high aggression. Sixteen black and eight Puerto Rican male fifth graders were the subjects of a test of this hypothesis. Four variables were examined: language proficiency, physical aggression, verbal aggression, and total aggression. Conclusions indiated that (1) Puerto Rican subjects had significantly lower scores than black subjects on total language proficiency, and (2) both verbal and total aggression results for the Puerto Rican group were significantly greater than those for the blacks. (The physical aggression scores for the Puerto Ricans were also higher than those for the blacks, but not significantly.) The authors state that the findings were limited by the size of the sample, the fact that females were present (as observers) in one group, and the fact that the results relate only to proficiency in Standard English as measured by one test. The authors suggest that their study may substantiate the idea that disruptive classroom aggression can be reduced by improving language proficiency. (Author/DI)

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## A. Introduction

After much deliberation and after having found no previously existing direct reference to our present concern in either of the two separate literatures dealing with language or aggression, we have decided that the main objective of our presentation today shall be to share with you the concept which we have come to call "the languageaggression hypothesis." The essence of this hypothesis is the notion that there exists an inverse relationship between level of language proficiency and amount of aggressive behavior. Measurable high language proficiency is assumed to be associated with low observable aggression and low language proficiency is postulated as being associated with high aggression.

Human language serves to abstract reality into a system of signs and symbols which most probably reflects the highest forms of human cognitive activity. Indeed, the relationship between language and thought is the focus of much psycholinguistic theory and investigation. Aggression in human beings represents a multi-processed, highly complex form of behavior which has already been linked to such intervening variables as frustration, hostility and competitive initiative. Our main purpose today is to set forth the idea that of the many factors and processes involved

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in actual aggressive behavior, we believe that <u>one</u> of these factors is language proficiency and that its consideration as a possible correlate of aggressive behavior may have heuristic value.

Our appreciation of the complexity and richness of these two forms of behavior has led us to the following tentative conclusions:

 at present, the language-aggression hypothesis primarily serves the purpose of providing a means of investigating the possible relationship between these two variables, and,

2) with such a high probability that many unknown sources of variation are operative, the statistical results will, at best, reflect only a small proportion of the total variability to be accounted for.

It should be noted that our present affirits are mimailly devoted to the establic mean of an associatic between language and aggress is; the theoretical conjectures which follow are presented as a set of speculations which attempt to account for this association.

The theoretical framework from which the present language-aggression hypothesis has evolved is the excitation-inhibition model originally proposed by Pavlov (1927) and utilized in America by both Hull (1943) and Spence (1956). If human behavior can be conceived of as the resultant of excitatory and inhibitory potentials generated by the constantly on-going interaction of stimulation by, and reaction



to, reality; then aggressive behavior may perhaps be the resultant of suddenly allowing excitatory reactions to occur which have, for varying periods of time, been held in inhibitory abeyance. Since Pavlov believed human language to be "the second-signal system," a system of abstractions from the reality of stimulations received from real objects, then perhaps the function of high language is, that by efficiently and effectively abstracting reality and symbolically neutralizing aggressive impulses, it prevents levels of aggressive inhibitory potentials from building up to the point where they are subsequently released as actual aggressive behavior. It is of interest to note that the work of Vygotsky (1962) may be interpreted as lending support to this notion through his contention that in young children the development of inner speech is the basic requirement for the subsequent development of self-control (see also the work of Luria (1.61).

Our choice of Black and Puerto Rican subjects as the initial test of the language-aggression hypothesis was made on the basis of speculations regarding their language proficiencies. They are:

1) Blacks may possess language proficiency in either Standard English, Non-Standard English, or both;

2) Puerto Ricans may possess various combinations of language proficiencies in:

- a. Standard English
- b. Non-Standard English
- c. Standard Spanish, and,
- d. Non-Standard Spanish;

The availability of four possible language forms 3) among Puerto Rican youth should (other factors operating equally) produce more confusion, inter-form negative transfer and intra-form intrusions as compared to Blacks (an example of the latter type of language process may be seen in a newly-coined phrase currently in use among young Puerto Ricans - "TRIPIANDO" - the English word "trip" referring to a drug experience being combined with Spanish grammar to form a word whose meaning is roughly "currently undergoing a drug experience").

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The specific experimental question arising from the above considerations west: If the assumptions concerning the levels of language proficiency as measured by a Standard English instrument (IBST) reveal lower scores amongst the Puerto Rican group as compared to the Black group, then will the Puerto Rican group be found to empress higher cosarvable levels of aggressive behavior:

The experimental design employed in the present study provided data concerning four main variables:

- 1) Language Proficiency (LP)
- 2) Physical Aggression (PA)
- 3) Verbal Aggression (VA) 4)
- Total Aggression (TA)

The observational technique employed to measure aggressive behavior within the present study did not permit us to analyze either the specific stimulations, nor the intentions which underly any given observable aggressive act. The specification and validation of the internal antecedents of aggression remain as issues to be dealt with in future studies.



Among the many ideas that have occurred to us through a consideration of the language-aggression hypothesis is a thought we would like to share with you today: May it not be that in our highly verbal American culture the most violent of us on the streets and the most aggressive in the classrooms are those of us who do not possess relatively high levels of effective language communication?

B. Methods

<u>Subjects</u>: The <u>Ss</u> were 16 Elack and 8 Puerto Rican male 5th and 6th graders atterning at inner-sity public school in New Jersey. Two Black and two Puerto Rican male undergraduates served as inservers; they were not informed of the hypothesis under test.

Material: Aggression we measured using an adaptation of the physical and verbal aggression categories employed by Walter, Pearce and Dahms (1958). The vocabulary (V), Reading (R), and Language Skills (LS) subtests of the Iowa Basic Skills Test (IBST) were used to measure language proficiency of the <u>S</u>s.

<u>Procedure</u>: Blacks were observed in a room consisting entirely of Black males. Puerto Rican <u>S</u>s were observed in a room consisting of both Puerto Rican males and females as onlookers. This experimental confounding of variables (the presence of females) was an unavoidable situation imposed on the study by the realities of the school regulations and constitutes a factor which shall be eliminated in future studies.



In order to provide a setting for the measurement of intra-peer-group aggressive behavior, all <u>Ss</u> were advised of participating in a "training program" designed to improve their English verbal skills. Each group was subdivided into smaller work-groups with each work-group assigned the task of listing as many words as possible from a given stimulus word. Obser ations of physical and verbal aggression were made, at separate occasions, for 3 minutes for each subject. Blacks were observed by Black Es and Puerto Ricans by Fuerto Rican Es. One week after completh n of aggressive behavior measures, So were tested in the V R, and LS subtests of the IBST.

### C Results and Discussion

The first analysis performed on the data concerned the level of language proficiency of the two groups as measured by the total grade-level scores given by the IBST. The total language proficiency scores of the Puerto Rican subjects ( $\overline{X}$ = 4.40 years below grade level) were significantly <u>lower</u> than the scores of the Black subjects ( $\overline{X}$ = 2.07 years below grade level; p<.01). Table 1 shows the values of the observable aggressive behavior for both groups:

# Table 1 - Mean Aggression Scores

	Physical (PA)	Verbal (VA)	Total (TA)
Puerto Ricans	6.3125	6.7500	13.0625
Blacks	3.5000	4.0000	7.5000



An analysis of the aggression results revealed that both the verbal and total aggression results for the Puerto Rican group were significantly greater than those of the Blacks (p<.05 in both cases). Although the Physical Aggression scores were also in the same direction of greater aggression for the Puerto Rican subjects, a significant level of confidence was not reached.

These results constitute the main finding of this exploratory study in that it appears to be the first time that a group of sub which is significantly lower in language proficiency have been found to be significantly <u>more</u> aggressive than the group against which they are being compared. This finding tentatively supports the contention that measurable language proficiency and observable aggressive behavior are indeed inversely related.

This finding is presented to you today with our painful awareness of the following limitations:

 The size of our total sample was merely 24 subjects and we recognize the need for verification using much larger groups that represent the American population at large,

 The results may be due to the confounding effect of females present in one group and absent in the other, and,

3) Until adequate measures of all forms of language proficiencies possibly present in both groups are performed, the results relate only to proficiency in Standard English as measured by only one test instrument. The relationship

between language proficiency in all forms of language usage available to individuals and their aggressive behavior remains an issue for future study.

In spite of the obvious limitations of this exploratory study, our view is that we have provided tentative evidence to support the speculation that relatively higher levels of language proficiency may function to reduce the relative amount of actual aggressive behavior (based on the results of the Elack subjects) and that relatively lower levels of language proficiency are associated with relatively greater amounts of actual aggressive behaviors (based upon the results of the Puerto Rican subjects).

The inter-rater reliability coefficient between the two Black observants was .85 (p<.01). However, the inter-rater reliability coefficient between the two Puerto Rican observers was .27 (p>.05). An analysis of scores between subjects in fifth grade and those in sixth grade revealed no significant differences in aggression as a function of gradelevel attendance.

In addition, it was found that individual verbal and physical aggression seem to occur together. Significant positive correlations for both groups revealed that individual subjects who tend to be high in one form of aggression also tend to be high in the other.

An interesting pattern emerged from the inter-correlation matrix of all variables for both groups. Blacks high in language proficiency tended to be high in physical aggression



and low in verbal aggression; while Puerto Ricans high in language proficiency tended to be low 1. physical aggression and high in verbal aggression. This reversal of pattern is based on the pattern of correlation direction and may well prove evanescent. However, it tentatively can serve to provide questions for future studies concerning the relationship between language forms and aggressive behavior.

### D. Educational Implications

Physical violence has become a major problem in large urban schools. In many of these schools there exists a relatively large proportion of students who continuously fight and harass their classmates. Such physical confrontations create an atmosphere in the classroom that disturbs the learning process and leads some teachers to emphasize discipline rather than learning. Although many aspects of our environment have contributed to this problem, a great deal of the physical violence in the classroom may eventually be traced directly to the child's inability to articulate his inner feelings.

One tentative hope arising from this pilot testing is the suggestion that further work may substantiate the idea that one way to reduce disruptive classroom aggression is to improve the overall level of language proficiency.

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