

## DOCUMENT RESUME

ED 043 383

PS 003 432

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 TITLE Emotional Characteristics of Disadvantaged Children of Appalachia.  
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 SPONS AGENCY Office of Economic Opportunity, Washington, D.C.  
 PUB DATE [67]  
 NOTE 11p.; Paper is part of the Annual Report of the Child Development Center, Temple University, Philadelphia, Pennsylvania

EDRS PRICE MF-\$0.25 HC-\$0.65  
 DESCRIPTORS \*Cultural Differences, Culturally Advantaged, Culturally Disadvantaged, Disadvantaged Environment, \*Emotional Development, \*Environmental Influences, \*Environmental Research, Language Usage, Negative Attitudes, Pictorial Stimuli, Psychological Patterns, Stimulus Behavior  
 IDENTIFIERS Appalachia

## ABSTRACT

Children living in the deprived environment of Appalachia were studied to determine if they showed a limited verbal response to stimuli in their environment, and if their emotional characteristics differed from those of advantaged children. An earlier study (1957) of American Indian children living on a reservation provided the stimulus for this research. The subjects were 93 white, 6-year-old boys and girls. Of this number, 34 were from a disadvantaged, rural background and 59 from a middle class, urban background. The subjects in both groups were shown five cards with photographs of human figures whose activity and emotion were ambiguous, and the verbal responses of each child were written down as he talked about them. The percentage of the children in the two groups using positive words was relatively similar. However, the percentage of disadvantaged children using negative words such as "fight," "mad," "sad," and "scold," was more than twice as great as the percentage of advantaged children using negative words. The tendency to perceive non-threatening or neutral stimuli as hostile, if persisting to adulthood, may adversely affect both the individual and society, and should be taken into account when planning ameliorative educational programs. (NH)

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## Emotional Characteristics of Disadvantaged

### Children of Appalachia

Theron Alexander<sup>1</sup>

#### A. Introduction

It is possible that one of the effects of an inadequate environment is deviant emotional development. Such development may result from stress and disorder in the family or from thwarting of need fulfillment by environmental circumstances. It is important to know about the nature or the effect of an adverse environment on emotional development not only because emotional disorder may be one result, but because motivational patterns of behavior may be affected to the extent that other areas of development, for example, cognitive development, may be impaired.

In earlier research an effort was made to study the effects of an adverse environment on emotional perceptions of children living in a limited area (Alexander and Anderson, 1957). The subjects in the study were Northern Cheyenne Indian children living on a reservation. Certain theoretical principles were used which have some relevance for this present study. For example, emotional perception was viewed as depending on a selective process growing out of intraorganismic needs and environmental conditioning. The interaction of the individual

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<sup>1</sup>

The assistance of Dr. Judith Stoyke, John Tighe, and Margaret Havard is gratefully acknowledged.

This report is part of Annual Report of Child Development Center, Temple University. It was supported by National Head Start Office (OEO). It is being prepared for publication in professional journal.

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with the environment then was seen as significant in determining essentials of the response patterns. Thus, an adverse environment would be reflected in the individual's general behavioral style. Further, perception was seen as involving the assignment of meaning to stimuli with conditioning and environmental interaction being causative in the selection of meaning assigned to stimuli.

In this study of the Indian children the cultural and environmental conditions were found to be adverse indeed. The reservation was on range and forest land given to the tribe in the last century. The economic state of the people was quite low and there was evidence of feelings of insecurity and anxiety, some of which came from the fear of hunger. Housing conditions were primitive and unsatisfactory, nutritional problems were common and disease was much more prevalent than in American culture at large. Those few Cheyenne adults who sought to work off the reservation could only perform unskilled tasks. A frequent phrase in Cheyenne was: "We are distressed." Analysis of the responses of the children showed that there was a limited verbal response to the stimuli presented--cards containing pictures of Cheyenne in social interaction. The perceptions of human beings were described as more often hostile than beneficent. Physical environmental characteristics were seen as particularly threatening--the children spoke of fear of death, being lost, and the dangerous forces of nature.

In consideration of the results of this research, a hypothesis was made that children living in the deprived environment of the

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Appalachian mountains also would be limited in their ability to respond to stimuli in their environment. Since this earlier study of the Indian children, research has led to the development of more objective means of analysis of the data than was first possible.

In a recent study of emotionally disordered children an effort was made to develop means of differentiation between emotional normality and disorder through the use of a lexicon of emotional words (Alexander and Leaverton, 1967). Also, objectivity was increased by placing all of the children's responses on data processing cards and then using a computer program for analysis of the data. First, the five cards were shown to all of the subjects individually. The children were told to respond to the figures in each card and to describe the interaction and the emotions of the figures. The responses were recorded and then placed on data cards. A lexicon of five "positive" words and five "negative" words was used (See Table 1). A formula taking into account the extent of the total verbal response as well as the use of positive and negative words was used. It was found that the children with behavior disorder had a more limited verbal response and used more negative emotional words than did normal children. Also, recently, in studies by other investigators similar techniques have been used (Farmer, 1967; Fenster, 1967).

In the present study principles of the earlier research were applied. The primary question to be answered here was: do the emotional characteristics of Appalachian disadvantaged children differ from middle class or advantaged children?

TABLE 1

Lexicon: Positive and Negative Emotional Words Used to Investigate Responses of Subjects to Study Stimuli

Positive	Negative
friend(s)	fight
good	mad
happy	sad
playing	scold
well	sorry

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## B. Method

### 1. Subjects

The subjects in this study were 93 white, six-year old children. Of this number, 34 (15 boys, 19 girls) were "disadvantaged." The remainder, 59 (29 boys and 31 girls) were middle class children living in a town with a population of about 40,000. This latter group is referred to as "advantaged" because the circumstances under which they live seemed to typify the majority of people in American society. There were none living in poverty and all were rated as "middle class" by Warner's Index.

The "disadvantaged" children of Appalachia are from the mountains and "hollows" where their families have lived for generations. The subjects lived with both parents and siblings in relatively socially isolated areas. Ways of making a livelihood in the mountains primarily consists of using simple agricultural methods on poor soil. Monetary income is extremely low.

### 2. Procedure

The subjects in both groups were shown five cards containing human figures. The figures were depicted so that ambiguity in relation to activity and emotion was achieved. Drawings of the stimuli used are shown in Fig. 1.

The verbal responses of each subject were written down as the child talked. Each child was seen individually.

The responses were placed on data processing cards as a method

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**Figure 1. Drawings of the Five Stimulus Cards Used in the Present Study The Original Cards are Black and White Photographs.**

of analysis based on the earlier research was used (Alexander and Leaverton, 1967). An analysis with a computer program using a formula ( $T + 50d$ ) was undertaken. In the formula, "T" stands for the total number of words used by a subject in response to the five stimulus cards; "d" represents the algebraic difference between the number of positive and negative words used by the subject (see Table 2); and, "50" was used as a weighting factor--this factor was determined by finding the smallest number of classification errors in reference to any other weighting factor.

### C. Results

A statistically significant difference was found between the disadvantaged subjects and the advantaged subjects on the basis of the formula  $T + 50d$ . The mean for the normal group was 168.6 and for the disadvantaged 96.7 ( $p < .05$ , median test). No significant difference in response was found between the sexes. See Table 2 and Figure 2. In Figure 3 the use of emotional words by the groups is shown. The percentage of the disadvantaged children using positive words was relatively similar to the percentage of the advantaged children using positive words. However, the percentage of the disadvantaged children using negative words was over twice as great as the percentage of advantaged children.

### D. Discussion

The findings of this study suggest differences in emotional perceptions and development between disadvantaged and advantaged children. While such differences might be expected, it seems to be



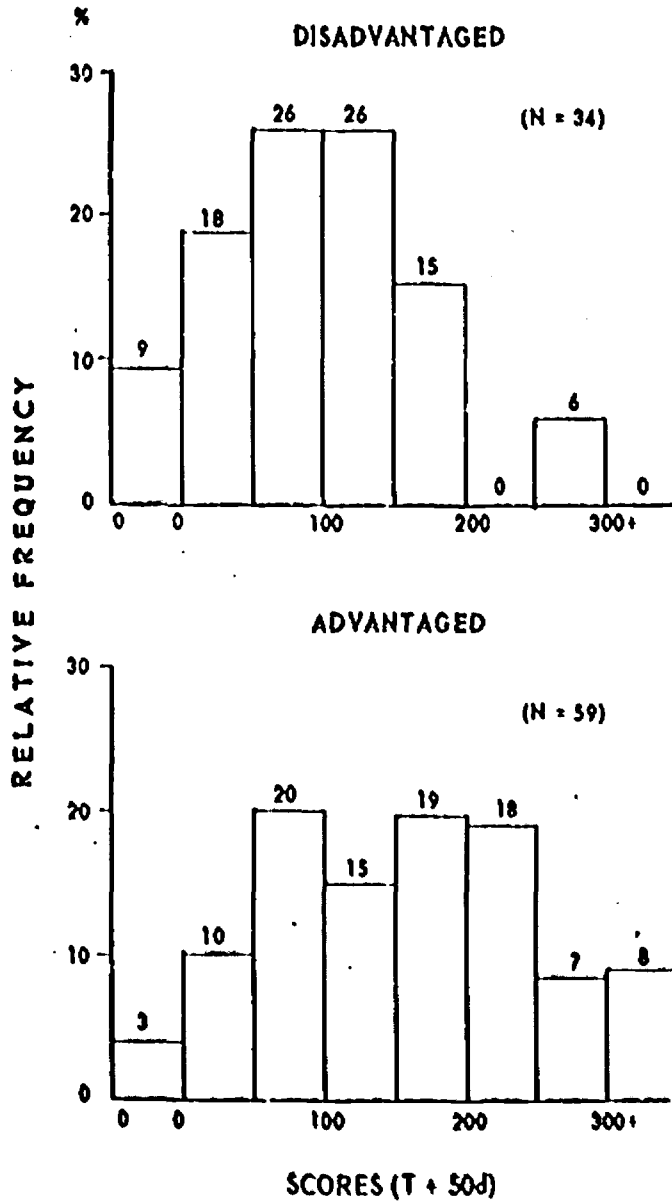
**TABLE 2**

**Subjects' Use of Emotional Words**

Group	Percent of Subjects		
	Using Positive Words	Using Negative Words	Using Emotional Words
Disadvantaged (N=34)	53	47	71
Advantaged (N=59)	46	22	56

FIGURE 2

RELATIVE FREQUENCIES FOR GROUPS OF  
SUBJECTS BASED ON SCORES DERIVED  
FROM FORMULA  $T + 50d$



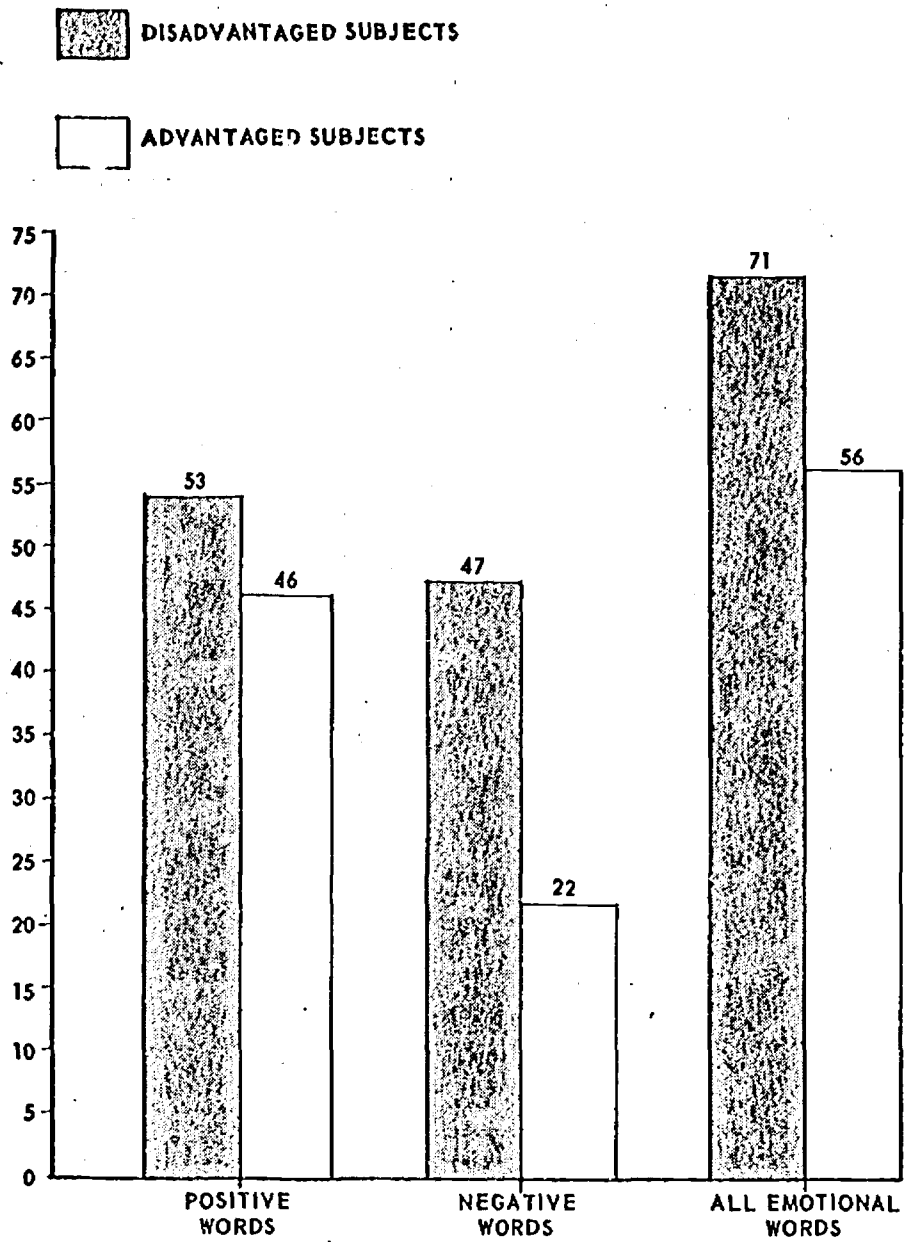


FIGURE 3 USE OF EMOTIONAL WORDS

important for ameliorative programs, particularly those of an educational nature, to take into account such differences. If a tendency to perceive non-threatening or neutral stimuli as hostile persists into adulthood, problems for the individual in a social order may be increased. And, the social order may indeed be adversely affected as a result of the influence of such individuals.

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