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LANGUAGE AND THE CONTROL OF AFFECT: A DEVELOPMENTAL STUDY.

The City University of New York, Ph.D., 1972
Psychology, clinical

LANGUAGE AND THE CONTROL OF AFFECT:

A DEVELOPMENTAL STUDY

by

Jo Lang

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1972

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

LANGUAGE AND THE CONTROL OF AFFECT:

A DEVELOPMENTAL STUDY

by

Jo Lang

Adviser: Professor I.H. Paul

This research was designed to investigate the role of language in the control and expression of affect. The major thesis proposed was that language is a major tool for the control and modulation of affect experience and expression. Two sub-theses were: (1) with increasing age, language is increasingly present and relied upon in relation to emotions; and (2) for any given child, to the extent that language is present and used in an affective response, his behavior shows greater evidence of control and organization than in a response without language.

Language ratings based on General Vocabulary (WISC Vocabulary subtest), Emotion Vocabulary (eleven Emotion words), and Spontaneous Affect Language Use (using 3 TAT cards) were obtained on 12 children between the ages of 5 and 12, hospitalized on a City Hospital psychiatric ward.

A rating scale was developed to isolate those aspects of the child's response which would reflect its affective nature and the ways in which

a child experiences and handles affect. Items on the scale assessed aspects of general behavior as well as language. The language ratings were correlated with behavior and language ratings of each child's response to 3 naturally occurring stress provocations. Analysis of the results revealed: (1) no support for a relationship between high language ability and more organized and controlled behavior in response to provocation, with some support for a tendency in the opposite direction; (2) a significant relationship between age and less controlled and organized behavior; and (3) for any given incident, a positive relationship between the use of language and the presence of more organized and appropriate behavior in response to stress.

The results were discussed within the frameworks of psychoanalysis and behavioral theory, with an attempt to understand the data in terms of the specific study sample: lower-class hospitalized children of varying degrees of psychopathology. The association noted between high language ability and poorer behavior in response to stress remains unaccounted for from within either theoretical position. The interesting finding of a coincidence of the presence of language and of more controlled and organized behavior in response to stress was considered suggestive, but open to issues of possible rater-bias. The small number of children studied, their relatively low language levels compared to the more general population, and the difficulties entailed in using newly-developed scales point to the importance of replication before general statements can be offered.

Acknowledgements

My deepest and warmest thanks and appreciation are extended to Dr. Fred Pine, who has stood beside me from the inception of the research. In a role that alternated between advisor, disciplinarian, editor, and friend, he was always there when needed.

My thanks also are extended to Dr. I. H. Paul, my "official" advisor, who permitted me to work things out with a freedom and flexibility which were deeply appreciated, but who was also there with the structure and support that was necessary at the end. Drs. Mae Lord, Herb Nechin, and Harol Wilensky were also helpful in their capacity as the additional members of my dissertation committee.

My very special thanks to Mrs. Susan Flinn, friend and "assistant," who gave her time and skill as my Observer, and helped make the hours of observation and rating pleasurable. Special thanks also to Drs. Maxine Antell and Nicholas Papouchis, who served as judges for scoring and ranking the language protocols.

Finally, to the most important people in the entire research, to the children as well as the staff of the children's inpatient psychiatric ward at Jacobi Hospital in the Bronx, my gratitude and appreciation for their cooperation, their assistance, and their permission for our presence during some periods when the last thing needed was a pair of non-participating observers, standing along the side-lines. Certainly, without their cooperation the research would never have been completed.

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Introduction

In spite of Freud's revolutionary contributions to the psychology of the unconscious, and in spite of an early near-exclusive concern with "making the unconscious conscious" in psychoanalytic therapy, most patients and clinicians have learned that the process of psychotherapy entails a great deal more than the recovery of repressed fantasies or experiences. Much of the ongoing phenomenology of being a patient concerns the ups and downs of feelings, and much of the therapeutic work is focused on feelings that are absent, overwhelming, or inappropriate. While psychoanalytically-oriented treatment may center on interpretation of transference and resistance, much work, especially in child therapy, is also devoted to the identification of feelings: what went wrong in their development and what currently goes wrong when they are experienced. The therapist also helps in identifying situations in the environment as appropriately evoking this or that emotion. Adult therapy, too, involves considerable talk about current feelings--although therapists will differ in their conception of the value of catharsis or expression on the one hand or of labelling and investigation on the other. Though emotions have a central place both in therapy and in human development more broadly, surprisingly little consensus regarding them is available in the theoretical and empirical literature (including the literature on therapeutic technique).

Recently, with the work of Shachter (Shachter and Singer, 1962), a beginning attempt has been made to understand the cognitive and situ-

ational parameters of the experience of particular emotions, with the result that one can begin to conceptualize the immense importance of learning experiences and the appropriateness of parental and other models in determining whether and how a person will develop a richness and variability in emotional experiences and behavior. These particular studies, however, do not provide understanding of the genetic aspects of emotional development. While many attempts have been made by physiological psychologists to discover consistent physiological differences determining or leading to the experience of different emotions, there has been little success to date. Within psychoanalytic theory (by and large the major theoretical framework for clinical work), there have been few major attempts to work out a theory of emotion (see, however, Rapaport, 1951), and for the most part treatment is carried on without a fully developed theoretical conceptualization of emotion, the development of emotion, or behavior expressive of emotion.

The research to be discussed here represents an attempt to isolate one aspect of the development and expression of affect[1]--the role of language--and to discuss it within the frameworks of psychoanalysis and social learning. The major thesis of the research holds that language (a learned modality) is one of the primary vehicles for

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[1]In the literature, as well as in discussion, reference is made to the words "emotion," "affect," and "feeling" relatively interchangeably. Some attempt to limit the resultant confusion will be made here. The first two terms will continue to be used somewhat interchangeably, as no adequate distinctions seem to have been made. However, in the literature (and in this paper), one can note a tendency to use "feelings" when speaking more about the phenomenological experience of a person; "emotion" when speaking more generically about the behavior; and finally, "affect" when speaking from within the psychoanalytic framework.

the expression of affect, and is one of the major ways in which the individual achieves control over and the capacity to modify the experience and expression of affects. This view coincides with that expressed by Katan in her 1961 paper on the role of verbalization in early childhood.

There are two assumptions underlying this thesis that need to be elaborated. The first is that in order for feelings to be expressed in a way that is understandable to others, they need to be labelled and integrated into the common communication system--a verbal one. Thus a child must progress from non-verbal, diffuse reactivity, to articulate verbal behavior. The second assumption is that language is a means of controlling and modulating both the experience and the expression of affect in appropriate, adaptive ways. Descriptively, Katan states the process thus: "The young ego shows its strength by not acting upon its feelings immediately, but by delaying such action and expressing its feelings in words instead" (1961, p. 186). She also states: "...if the child does not learn to name his feelings, a situation may arise in which there develops a discrepancy between the strength and complexity of his feelings on the one hand, and his modes of expression on the other" (1961, p. 186). There is indeed experimental evidence suggesting that the ability to delay develops gradually with age, and that the child showing more delay capacity is also the child with greater verbalization (cf. Mischel and Metzner, 1962). These authors studied delay of gratification, advancing the argument that the ability to delay is part of the developmental process towards increased reality testing and secondary process functioning, and decreased impulsivity.

This study will focus on the importance of language as a control mechanism in the experience and expression of affect. It is of course difficult to ferret out, in developmental studies of this kind, which of two evolving functions comes first; in this case the question remains whether language appears first and leads to increased affect-control, or whether the beginnings of affect-control permit the development of language. There is a tendency in the literature, however, to assume that when problems in control appear (as in problems of impulse disorder or acting out), the failure of adequate language development is one of the critical determinants (cf. Gardner, 1966; Michaels, 1959; Malone, 1966). The observations made here will be used to demonstrate an association between language and affect control. Language ratings will be made on children varying in age from about 5 to 12 years, and these ratings will be correlated with observed responses to stressful provocations. Levels of affect control in these stressful situations will be analyzed in relation to the presence or absence of language in general, affect-related language specifically, and the use of language in the stressful situation itself. Clinical observations of developmental sequences and patterns of behavior will be discussed.

Theoretical Review

In the following pages, several streams from psychoanalytic theory and from a more behaviorally-based social-learning approach will be discussed as they pertain to the basic theses of the study. While psychoanalytic theory has by no means arrived at a final theoretical formulation of affect and affect development, there is a body of theoretical statements relevant to a theory of affect (cf. particularly

Rapaport, 1951). From this, the ensuing discussion will focus on several themes: namely, the place of affect in psychoanalytic theory, the development of controls over impulse and affect discharge, and the role of ideation (and language) in the development of these controls. Following this there will be a discussion of the hypotheses of this study, formulated from within psychoanalytic theory, in relation to ideas drawn from a social-learning framework. Finally, selective aspects of the research literature will also be discussed as they pertain to the major theses and hypotheses of the study.

This review has as its aim the explication of the development within psychoanalytic theory of a theory of affect. Affect evolved from an energy concept to a position as part of the later developed concept of Ego. It is conceived of as serving control functions and as itself subject to control. Similarly, affect is conceived of as evolving within the lifespan of the individual from a relatively pure energy role (as diffuse discharge in the infant) to a role of increasing organization and specificity, controlled by and serving to control and focus other behaviors of the individual. It is in this evolution towards increasing control that language is seen as playing a critical role.[1]

Freud began by conceptualizing the inner life of the individual as consisting of quanta of energy--instincts or drives--which were the moving forces of the person. He conceived of this energy as attaching itself to different parts of the body at different periods of the child's development, and needing different kinds of behavior and objects

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[1]This review draws heavily on Rapaport's 1951 and 1953 papers, and on the following works of Freud: 1900, 1911, 1915a & b, 1923, 1936.

to satisfy the drive, i.e., permit the proper discharge of energy. Energy periodically builds up in charge, necessitating some form of behavioral discharge, which is the force leading to overt behavior. Stated simply, instinct (or drive) culminates in discharge and behavior is quiescent until the energy builds up again. As the individual develops, different behaviors become associated with partial drive satisfactions, and drive satisfaction comes to be achieved via numerous behaviors.

Within this original framework, affect had a central role. As originally conceived, affect was the quantity of psychic energy attached to or a part of instinct. As such, it was considered to play a critical role in symptom formation: e.g., in the hysteric, when the instinct was repressed, the affect was redirected and appeared in the symptom. In this early period, there was already a beginning distinction made between the disposal of drive tension alternatively via direct action, affect 'discharge,' or through the work of thought (via associations). Affects were considered to be the "motor and secretory (discharge) processes which are controlled from the unconscious" (Rapaport, 1953, p. 482). What was still unclear at this time, however, was the conception of affects on the one hand as part of the instinct, and on the other hand as representations of it. Rapaport states that "the tension which is diminished by affect discharge is that of drives. More specifically, affect expression is the final outcome of the discharge of a specific part of drive cathexes, termed 'affect charge.' 'Affect charge' and 'ideas' are both drive representations..." (1953, p. 483). Affects, then, are both 'representations' of drives, and "partial

vicissitudes of drives" (Rapaport, 1953, p. 485). Affect discharge or expression was seen as the outcome of accumulated drive tension that was unable to be discharged as such. It occurs when drive-discharge is blocked, but is a diffuse discharge into the motor and secretory systems, unlike object-directed (drive) discharge in action. (Rapaport, 1951, p. 691) Rapaport states: "Affect-discharge...rarely if ever eliminates the energy-disequilibrium. ...[it] is both an indicator and a safety valve of drive-tension, that is, of energy-disequilibrium. The energy so discharged is termed affect-charge, and is considered only a relatively small amount of the drive-cathexis which constitutes the energy-disequilibrium" (1951, p. 691).

Although the view of affect as partial discharge of and indicator of drive-tension has not totally disappeared, with Freud's development of the structural theory (1923) the emphasis on affect as discharge phenomenon also changed. In the structural theory affects were reconceptualized as functions of the ego, serving as signals of ongoing processes. This was implicit as early as 1900 when Freud wrote that the thinking processes must restrict "the development of affect in thought-activity to the minimum required for acting as a signal" (Freud, 1900, p. 602). Now affects were ego functions, used by the ego as signals; to the extent that affects were <u>also</u> thought of as discharge processes, they were viewed similarly to drive-discharge--a process that in the mature individual is modified, 'tamed,' and otherwise channeled through 'higher' functions.

There is an interesting parallel here, between the developments

in the psychoanalytic theory of affect and the development of affect in the growing child. In the theory, affect-discharge--a relatively diffuse discharge of energy--was included in the original view of the instinctual life of the individual. With the development of the concept of "the ego" and the higher-order control functions of the ego, affect-discharge was seen as a process subject to control and organization, and affects served predominantly as controlling and organizing functions (signals) themselves. Looking next at the development of affect within one individual, one first sees affect as diffuse-discharge or reactivity. With further ego development, seen particularly with the development of secondary process functioning, affects become differentiated, controlled, and increasingly focused, serving themselves to organize the individual in his search for drive satisfaction.

One of the critical results of affect and impulse control is that of the delay of immediate gratification, a delay necessary for adaptive functioning. The main mediator of such delay is thought. Drive-tension builds, and if the drive-object is not present (as, for example, the breast is not available with mounting hunger), the infant develops an hallucinatory image of it. This is the primary model of thought, and the hallucinatory image of the wished for object is the first ideation. The delay achieved through the hallucinatory image--the delay, that is, of direct gratification through overt motor action--"becomes the cradle of 'conscious experience'" (Rapaport, 1951, p. 690). With the development next of ideas and what we conceive of as thought (secondary process thinking), thought and affect become vehicles for the controlled discharge of small amounts of psychic energy. Rapaport

states that when ideas "appear in hallucinatory form, they utilize and discharge a fraction of the drive-cathexis. Accordingly, ideas may be considered safety valves of drive-tension, even if they dispose of relatively small amounts of cathexes" (1951, p. 691).

In his summary of the theory of affect, Rapaport said: "The general development of psychic structure begins with innate discharge-regulating thresholds, is fostered by delays of discharge enforced by reality conditions, and progresses by internalization of the delay of discharge caused by reality, establishing an ability to delay. This ability is achieved by defenses (countercathectic energy distributions), which may be regarded as alterations of discharge thresholds" (1953, p. 505). Further: "The damming up of drives by defenses [e.g. via thought in intellectualization] makes for more intensive and more varied use of the affect-discharge channels and of the corresponding 'affect charge'" (1953, p. 505). Thus, the development of the ability to modulate discharge--of drives and of affect--is rooted in the structural givens of the individual, as well as in the modifying experiences of the environment (e.g. timing of lack of drive-object; availability of models and teachers for 'thought').

Most important for the present thesis is the intricate connection between drive and affect discharge on the one hand--(the dual needs for delay of discharge in the maturing individual)--and the role played by thought in this delay process on the other. While neither Freud nor, later, Rapaport conceptualized language as playing an integral part in this process, they do refer to the role of language in making ideas--thoughts--conscious. Freud noted: "It is probable that thinking was

originally unconscious, in so far as it went beyond mere ideational presentations and was directed to the relations between impressions of objects, and that it did not acquire further qualities, perceptible to consciousness, until it became connected with verbal residues" (1911, p. 221). Rapaport did not fully agree with Freud. He noted: "It has been assumed that attainment of attention-cathexis amounts to establishing connection with verbal traces. This is indeed often the case. However, it seems safer to assume that full consciousness of an idea entails only its hypercathecting and the availability of its relationships to all relevant psychic content; among these, its relationship to the verbal-trace may or may not play a role" (1951, p. 698).

There are thus theoretical statements linking thought to the development of delay, and linking language to the availability of conscious thought (making note, however, of Rapaport's qualification). Going one step further, one can say that language would appear to be an important--if not critical--link in the development of the ability to use thought in the delay of drive and affect discharge. It is clear that as conceptualized within the practice of psychoanalysis, bringing affects (as well as thoughts and experiences) into consciousness is a primary goal. And, how else to know that something has reached consciousness than by the words used to describe the contents of thoughts? Indeed, descriptively, we assume that if something is expressed in words, it is prima facie evidence of the delay of direct discharge, and thus evidence of a maturational step in functioning. It is the task of this research project to demonstrate just such an interaction. That is: if indeed a given child has greater verbal abilities and he can, there-

fore, bring into consciousness more of his thoughts and feelings, he will not have to resort to, or experience passively, massive drive or affect discharge. It is this process that Katan describes in her paper on the role of verbalization in early childhood (1961) and in her book on the therapeutic nursery (Furman and Katan, 1969), although her descriptions remain clinical impressions only. Such research must also take into account the different ways in which verbalization can be misused as well as used, as in the highly intellectualized individual who uses intellect (thoughts or words) defensively, to keep drive material and affect out of consciousness. For such a person, language appears to control affect but in an inflexible way, allowing little affect expression or discharge. This person may then be subjected to the same overwhelming experiences of affect discharge as the individual who has not developed such higher-order controls. For each of these persons there is no structure provided for modulated affect-discharge at an appropriate non-disruptive level.

It is interesting to note that the relationship predicted between language and affect is consistent with a more behavioral, social learning, orientation. When physiological studies attempting to isolate particular autonomic arousal patterns associated with specific emotions proved relatively fruitless,[1] experimental work began to focus on actual behavior (action and verbal) associated with the expression of emotion.

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[1]The major exceptions to this general finding are the work of Ax (1953) and Funkenstein (1955) who did find autonomic patterns differentiating anger and fear. Also, Lacey and Lacey (1958) have demonstrated patterns of arousal consistent for an individual covering several emotions, and differentiating people from one another. However, for the most part, experimenters have been unable to replicate the specific patterns of arousal associated with specific emotions found in other studies.

An important line of research was begun with the work of Shachter and Singer (1962), who developed the thesis that 'emotion' was a combination of autonomic arousal (general in nature) and cognitive apperception of the environmental context. That is, given a person experiencing an aroused state, he will label his emotion according to the situation in which he finds himself and in accord with how he has learned to define such a situation, and will act accordingly. While much that we consider crucial to our own experience of emotion may be left out of such an analysis, it does account for the failure of physiological studies to demonstrate reliable differences in internal state varying according to different apparent emotions. It also points up the critical importance of learning. Within such a behaviorally-based learning model, one would conceptualize action and verbalization as alternative behaviors learned as responses to various stimulating experiences. To the extent that a child learns, through direct teaching, through trial-and-error or through imitation (modelling experiences) to respond with abandon, to that extent his behavior may be labelled inappropriate or impulsive in nature. However, to the extent that the child learns to respond with words and behaviors appropriate to the given context, to that extent one would call his behavior 'mature,' appropriate, or well-modulated. In the view of either theoretical orientation, one can then account for the developmental change from diffuse, undifferentiated responsiveness to increasing specificity and focus of response, as well as for the gradual change to more emphasis on verbal expression. In the one case, emphasis is placed

on the role of interpersonal learning experiences in the development of socially appropriate and adaptive responses, whereas in the other, emphasis is placed on the role of the development of internalized structures (of control and delay) serving to modify and modulate the discharge of instinctual energy.

Survey of the Literature

A critical problem for any discussion of emotion lies in the difficulty of definition. What is emotion? What is an emotion? Are we describing a subjective feeling? or a particular kind of behavior? or a physiological process? There are as many answers to these questions as there are theoretical approaches to the field of psychology as a whole. Just as each field chooses a delineated (and limited) area for study, so must one choose in studying emotion. While this invariably leaves out important other aspects (e.g. the behaviorist leaving out the "feeling-part" of emotion), each approach contributes importantly to a fuller understanding. Psychoanalytic theory has perhaps done a better job in conceptualizing emotion as qualitatively different from other behaviors studied, and one might argue that the special contribution that it has made is to take those behaviors and feeling states that have played such an important part in the phenomenal experience of the individual and place them in a theoretical context. Probably one of the clearest statements, placing emotion as we know it and as it is discussed within psychoanalytic theory in perspective with the more general literature, is one by Rapaport in Emotions and Memory (1950). He there describes the theory of the

mechanism of emotions as follows: "An incoming percept initiates an unconscious process which mobilizes unconscious instinctual energies; if no free pathway of activity is open for these energies--and this is the case when instinctual demands conflict--they find discharge through channels other than voluntary mobility; these discharge-processes--"emotional expression," and "emotion felt"--may occur simultaneously or may succeed one another, or either may occur alone; as in our culture open pathways for instincts are rare, emotional discharges of varying intensity constantly occur; thus in our psychic life, besides the "genuine" emotions described in textbooks--rage, fear, and so on--an entire hierarchy of emotions exists, ranging from the most intense to mild, conventionalized, intellectualized emotions" (p. 37).

There have been few studies in the past 10 years or so that have explicitly dealt with the development of emotion and the relationship of language to such development. Those who have made observations on young children describe a process of initial diffuse reactivity and increasing differentiation of emotional response (see, e.g. Ausubel, 1957; Anderson, 1950; Jersild, 1954). Note is made not only of the increasing differentiation of behavior, but also of the increasing differentiation of cues--internal and external--which come to stimulate an ever increasing variety of behaviors labelled emotion. With increasing age, controls are developed, so that what was originally manifested as diffuse, disorganized discharge-like behavior generally comes to be socially appropriate, controlled, and modulated expression of emotional states. Where such controls are not instituted, we see

behavior that is generally labelled 'pathological'--the "impulse disorder" child, the "behavior disorder," and so on.

There are two important exceptions to the dearth of explicit research on the relationship between language and emotion. One is a study by Alexander and Leaverton (1967), who studied the verbal responses of "behavior disorder" and "normal" children to pictures, shown with the instructions to describe the interaction and emotion perceived. A general finding of their work, done with children between 7 and 12 years, was that the total verbal output of the children with behavior disorders was less than that of the normal children. The authors were not interested, however, in studying the ways in which language was related to the actual behavior of their subjects and many questions were left unanswered.

The second is a study by Gilbert (1969). She was interested in demonstrating that children who have "affect concepts" (i.e. language showing more awareness and differentiation of affects) show a greater variety of behavior expressive of emotions and more control in their expression than children who don't. Gilbert used vocabulary lists (five emotion words and the WISC vocabulary subtest) and TAT stories for measures of affect concepts and correlated these with numerous ratings by the children's teachers. While she was not concerned with specific measures of affect control, Gilbert did show that the children who had more "concepts" related to emotion were those whose teachers felt they were more able to verbalize feelings and "more likely to express a range of affects and to be empathic, imaginative, and joyful" (Gilbert, 1969, p. 638). Gilbert also found that as age in-

creased (from 4 to 6 in her study), children developed "greater differentiation of affect concepts and a greater tendency to make inferences about their own and others' feelings" (p. 638).

The major research published to date in this area centers around three main areas: (1) disturbances in language development correlated with impulse and behavior disorders in children and adolescents; (2) differences in language correlated with different behaviors in comparisons of social class groups; and (3) studies of the social and psychological parameters of delay of gratification. While none of these studies specifically discusses the relationship of affect and affect control to the presence of language, they all pertain to behaviors directly associated with such controls, and suggest that such an association does in fact exist.

Within the first of these areas there is now a body of literature suggesting that as a group, behavior disorder children show disturbances in language development, as well as other disturbances in cognitive and personality structures (cf. Spivack, 1964; Malone, 1966). Malone describes such children (preschool children who "act upon impulse") as showing "low frustration tolerance, impulsivity and unreliable controls, dominant use of motor action for discharge, language retardation, tendency to concrete thinking, need-satisfying object relations, little evidence of constructive play or use of fantasy in play, poor sense of identity, and marked use of imitation" (1966, p. 24). Malone discusses these features within a psychoanalytic framework, seeing the plight of these children as one of developmental lag in the transition from primary to secondary process thinking, in the

capacity for stable integrated internalizations and in their dominant use of action rather than words. In his paper, Malone goes on to analyze the processes through which these developmental delays interfere with the capacity for impulse control. In a discussion of how language may function in controlling behavior and in the development of ego functions, Lidz (1966) notes that the learning of "valid meanings" plays a central role in "autonomous ego functions," and that the process of learning language is not adequately described by speaking of the teaching of words by repetition or reinforcement. He states: "Without learning instrumentally valid meanings of words, a person is capable of very little ego control...Gaining the essential ability to defer or relinquish immediate gratification of needs may well become confused in very early childhood in acting-out children because signals do not seem to solve problems for them. The ability to communicate verbally should lead to more focused efforts at problem solving, but it may lead to only increased misunderstandings" (p. 20).

In a discussion following a paper by Rexford on the Developmental Concept of Acting Out (Rexford, 1966), Gardner points out the close association in children between acting-out and "word-usage immaturation or verbal symbolization failure" (p. 18). He notes that the only methods available for mastering anxiety in the child whose thought processes are essentially nonverbalized or inadequately governed by words are "(1) mobility in action, or (2) pictographic anxiety-reduction fantasy to an inordinate and disabling degree" (1966, p. 19).

Spivack (1964) studied a group of middle-class delinquent boys in a residential treatment center, focusing on the role of thought in

control of impulsive behavior. Through various measures designed to tap cognitive capacities (e.g. means-end measure through story completion; story completion involving facing a temptation; Rorschach Index of Repressive Styles; object sorting; Future time perspective), he found a severe deficiency in their mediational processes. He noted that these boys do not stop and think, or consider alternatives, and that they are unable to represent their experiences verbally. He further notes: "Language and thought are not available to them as a tool to use in maneuvering their environments successfully and in achieving their goals. When we describe them clinically as being unable to delay gratification or as being anti- or asocial, I believe we are dealing with a serious cognitive deficiency" (Spivack, 1964, p. 8). In considering possible childhood experiences which might influence the development of articulated and effective thought processes, Spivack suggests that verbal activity in the home may be the crucial determinant. In homes where language is used extensively, in articulated discussion and particularly in direct expression of feelings, with concomitant labelling of these feelings, one would expect to see developing a growing ability in the child to use language and thought to regulate action. On the other hand, children without these kinds of experiences, would be likely to arrive at a point where language or thought is unrelated to direct action, leaving the child with no means for effective self-control.

Turning to the second main area of research, several authors have studied the differences and attempted to analyze the components of the language of different social classes, since it has become a

truism that it is within the lower classes that one finds behavior that is more disorganized and more prone to be impulsive (i.e. showing less ability for delay). Deutsch (1965) and Hess and Shipman (1965) describe the less complex and more restricted use of language in the lower or more disadvantaged groups. Hess and Shipman note that the nature of the control system between parent and child of a 'deprived' family is one which "restricts the number and kind of alternatives for action and thought that are open to the child; such constriction precludes a tendency for the child to reflect, to consider and choose among alternatives for speech and action. It develops modes for dealing with stimuli and with problems which are impulsive rather than reflective, which deal with the immediate rather than the future, and which are disconnected rather than sequential" (1965, pp. 870-871). With a similar analysis of the differences between middle and lower classes, Bernstein (1960) attempted to demonstrate that given similar IQ scores, classes would differ on vocabulary scores, reflecting his differentiation of language characteristics of the two classes (differentiated as to descriptive vs. abstract, and less vs. more ability to express subjective intent). He found that subjects between the ages of 15 and 18 within the higher ranges of IQ showed differences in vocabulary scores as measured by the Mill-Hill Vocabulary Scale (with IQ measured by the Ravens Progressive Matrices), with vocabulary scores depressed for the lower class subjects.

The third line of research supporting the thesis of the importance of language in the development of delay and other forms of control is the program of work by Mischel on delay of gratification. In an

array of studies (Mischel and Metzner, 1962; Mischel, 1961a, 1961b, 1961c, 1958) Mischel studied the various parameters of the development of the ability to delay immediate gratification, experimentally studied as the preference for a delayed but larger over an immediate but smaller reward. Of pertinence here was a study by Mischel and Metzner (1962) where they found increasing amounts of delay-reward choices with increasing age, with the greatest jump between children in grades 3 and 4. They also found that preference for delayed reinforcement was positively correlated with higher intelligence scores, suggesting that indeed greater cognitive facility (and presumably language abilities) is correlated with increasing tolerance of delay. The shift in behavior at grades 3 and 4 noted by Mischel and Metzner is also consistent with the work of Kendler (1963), who studied mediation responses in children by noting the kinds of transfers made from initial to subsequent discrimination problems. She found that children at ages 5-7 were split as to whether mediation was used or not, whereas children 3-4 years never used it. Similarly, Luria (1960) notes that by 5-7 years language can influence behavior, although he also states that language can begin to be used as a self-regulatory process (though with the help of others) at a much earlier age (4½-5 years).

Summary and Hypotheses

There is evidence, then, in the literature, to support the major relationships predicted in this study. To review, the major thesis proposed is that language is a major tool in the development of the ability to control and modulate affect experience and expression. Several sub-

theses are the proposals (1) that with increasing age, language is increasingly present and relied upon in relation to emotions; (2) that for any given child, to the extent that language is present and used in an affective response, his behavior shows greater evidence of control and organization than in a response without language; and (3) that children differ in their ability to use language for effective control and expression of emotion as a function of differences in personality characteristics in general (although this is not viewed as independent from the ability to develop adequate language in the first place).

Since we are concerned here specifically with the control of affect-behavior, rather than behavior in general, special attention will be paid to affect language as well as to general level of language ability. Further, recognizing the inherent difficulty in isolating particular affects, affect will be treated experimentally as a general response to certain provocative stimulating circumstances, and any further refinement will be left to a more clinical discussion at the end.

The following hypotheses will guide the analysis of results:

1) The higher the individual child's level of general and affect language ability, the more controlled, less diffuse, more organized will be his response to 'stress' incidents, and the more integrated will be his use of language in his response.

2) Developmentally, with increasing age, children will show more controlled, less diffuse, and more organized responses to 'stress' incidents.

3) There will be an interaction-effect between age and

language ability, with older children in general showing greater language ability and thus more controlled and organized behavior.

4) In a comparison of the observations on any one child, the use of language in response to a provocation will be correlated with behavior that is more controlled and organized than behavior without the presence of language.

Additional questions to be explored in the final analysis of the results are: (1) how does sex-differentiation relate to the presence or absence of language as well as to the nature of the affective response; (2) how does the nature of the provocation (e.g. verbal vs. physical assault) affect the nature of the response; (3) how does the level of stress affect the nature of the response; (4) how does intellectual level (IQ) relate to the use of language in a response and/or to the nature of the response in general; (5) how does diagnosis relate to the variables under study; and (6) how does the overall environmental structure (e.g. different ward settings) affect the nature of the response (and/or the nature of the provocation).

In this study, a group of children hospitalized for psychiatric disorders will be observed as they are involved in various daily routines. Observations will be made on a naturalistic basis of "stress" incidents (assumed to stimulate 'affect') as they occur to a selection of the children in the course of the child's day. A rating system will be used for the analysis of kinds and levels of stress incidents, to be applied at the time that observations are made. Two raters will be

recording such incidents as they occur, and will record the response behavior (including language) of the child who has experienced the incident. Independent assessment of the child's general language ability (using the Vocabulary subtest of the WISC), affect-language ability (using a list of 'emotion' words from everyday speech), and spontaneous affect language (using a set of 3 TAT pictures) will then be correlated with his response to the stress incidents.

The choice of a group of hospitalized children as the study population was made with two major considerations in mind. First, it is the population with which the author has worked most extensively, providing easy access to subjects for data collection as well as for additional information or clinical observation as needed. It is also a population which would be likely to illustrate those instances where the development of language and affect control has not proceded smoothly, and where one might have the opportunity to study the parameters of such deviation in development in addition to the relationships predicted in the study.

Method

Subjects. Subjects were selected from a group of children hospitalized on the emergency-evaluation psychiatric ward at a Bronx City Hospital. The children on the ward vary in age from a lower limit of approximately 5 years up to 12 years. At any given period, the population of the ward can vary from 12 to 20 children, of both Full Time and Day Care status. The children enter the ward for a variety of reasons, including: close observation of reported psychotic behavior; suicidal or homicidal behavior; school behavior problems with or without associated learning disabilities; severe behavior problems in general; and disorganized or disturbed behavior associated with parental neglect or parental disorganization or hospitalization. From this population, subjects were selected as incidents occurred, in varied settings. Observations continued until 12 children had each been rated in 3 different stress situations, necessitating a period of 6 months. The only children who were specifically excluded from study at the outset were those so severely disturbed as to have no language at all. During the time span of the study, there were 3 such children.

The summary characteristics of the 12 children observed are presented in Appendix A. The youngest child was 5 1/2 at the time of observation, and the oldest was 11 3/4. Although one can argue that the few number of cases in the lower age ranges does not enable

a full exploration of developmental differences, the exploratory nature of the study and the small overall number of children observed three times during the six-month period seemed to warrant inclusion of all subjects who were observed in the criterion number of stress incidents.

Procedure. The basic procedure centered around the observations made upon each child as he became the object of an external stress provocation. Two raters were situated in the areas where more than one child gathered, assuring that over the course of observations, children were observed in the full variety of settings possible (e.g. meal-room, day room, gym, classroom, and bedroom). These settings can vary as to the degree of control instituted by the ward nursing staff and school teachers, with perhaps the greatest degree of external structure provided by the classroom settings. In the other settings, structure and control vary according to the child-care philosophy of the particular staff on duty. An attempt was made to assure a representative sample of incidents from settings providing the range of structure and control available to the children during the course of a day.

Criteria for a 'stress provocation' included physical or verbal assault, verbal demand or command, accidental assaults, and the like; others are listed more specifically below. Incidents to be rated were decided upon by the raters, by agreement, at the moment; in this way, we were able to assess inter-rater agreement on ratings without having to deal simultaneously with inter-rater disagreement on incidents. Any behavior on the part of a child or adult which would

clinically be judged as a sufficient stimulus for a negative affective response (e.g. anger, anxiety, guilt, jealousy, sadness), was used as the cue to begin rating the subsequent response. Examples of such behaviors are: a child grabs a toy or other object from another child; a child curses or otherwise specifically verbally or physically abuses another child; an adult intervenes--verbally or behaviorally--with the ongoing behavior of a child; another child is given a special present; a long awaited parent or therapist fails to arrive for a visit; a child is chastised for unacceptable behavior (which itself had not just been rated as part of a 'stress' incident); a child is clearly observed watching a second child in a highly nurturant interaction. Also included were incidents clearly accidental in origin, but provoking a negative affective response from the child.

A response 'unit' for observation and rating was judged to begin at the point of provocation as noted, and continued until (a) a clear termination resulted (e.g. the child began a new activity; the child turned to a new person and a new interaction occurred; the child showed a clear break in activity level and quality) or (b) five minutes of continuous observation passed. No new response was observed until the previous one had been completely described and the rating scale completed.

A Rating Scale designed by the experimenter was used to rate the nature of the subjects' responses. The response to each incident was rated according to the quality of organization of the response, its adaptiveness, its integration, its focus, the use and nature of

language in it, and its appropriateness. In addition, a full description of each incident and response was obtained for later use as needed. The Rating Scale was designed to isolate as much as possible those aspects of a child's response which reflect its affective nature and the ways in which a child experiences and handles affect. To this end, several approaches were taken. First, two general ratings were developed, one focusing on the overall intensity of the response and the other on the relative amounts of language and overt behavior in the total response. These are simply meant to capture two major descriptive parameters of the response.

Next, 5 items were designed to assess the control and organization of the child's response. These are: the focus of the response, its organization over time, its appropriateness, the child's own sense of mastery in responding, and the degree of flexible control in the child's expression of affect. These items were each intended to reflect a range of ratings from "healthy" to more pathological. It was neither expected nor intended that these be statistically independent; they were to be used to derive a composite score (unless statistical analysis indicated that the items could not be thus grouped).

Finally, 7 items assessing the language present in a response were developed. These items are: general language level, presence of affect language, the focus of the language used, the availability of language, its function in the response, its role in expressing emotion, and its role in controlling emotional expression. These items were viewed as part of the response, to be studied in relation

to general language level; but they were also to be used specifically in testing hypothesis 4--the relationship within each child between the degree of organization of the response and language level in the particular response.

Before beginning the observations for the study, the experimenter and the observer practiced using the rating scale together, until it was clear that each understood the items similarly. For a description of the complete rating scale see Appendix B.

As soon as a child arrived on the ward (i.e. before any observations were made), the experimenter obtained the following measures of language ability:

(1) General Vocabulary: In order to obtain a standardized measure of general vocabulary level, the Vocabulary subtest of the WISC was administered and scored by a panel of 2 judges (both Clinical Psychologists) according to regular WISC scoring standards. In addition to being an index of general vocabulary, this was also expected to give an indication of IQ level of each child (where Full Scale IQ's were missing), as Cohen (1959) has shown Vocabulary to be highly correlated with Full Scale WISC IQ scores. The WISC Vocabulary score can also be used in raw or scaled form, holding age constant or not, as needed. In addition to the WISC Vocabulary Scaled Score, Full Scale IQ's were available for 8 of the 12 children. (See Appendix A.)

(2) Affect Vocabulary: In order to obtain a measure of affect vocabulary, a list of 11 words commonly used to describe major feeling-states were chosen. Eleven words were selected as being most

common in ordinary language used by children, leaving out words that, in informal pre-testing, appeared to elicit redundant definitions (e.g. angry and mad, or scared and afraid). They were administered to the child with the instructions to tell the experimenter what they mean; in the event that a child could not define the word, he was asked to state when someone might feel that way. The same panel of 2 judges was given instructions for ranking the protocols of all the children according to their ability to find words describing the appropriate feeling. Thus this was not a standardized vocabulary test such as was obtained with the administration of the Vocabulary sub-test of the WISC, but rather an attempt to assess each child's ability to put feelings into language that, with some precision and articulation, conveys the feeling. For a list of the 11 Emotion words administered, see Appendix C.

(3) Spontaneous Affect Language Use: In order to assess each child's tendency to use affect-words spontaneously, three TAT pictures were shown with the instructions to describe each picture. Gilbert (1969) used cards 3BM, 3GF, and 7GF, noting that these cards had been found to elicit more affect labels than the others. The panel of 2 judges was given instructions for ranking the protocols of all the children according to their tendency to describe feelings with appropriate language, to perceive and accurately interpret in words affect in interpersonal situations. All three vocabulary measures were designed to get reasonably standardized (i.e. the same for all children) assessments of language level, outside of the affectively charged situations (i.e. the ratings of stress situations). The affect

vocabulary was added in order to assess the child's understanding of specific words when asked to define them. The Spontaneous Affect Language Use test was added in order to assess the child's tendency to use affect words, irregardless of his ability to define them.

For a description of all the scoring instructions given to the judges, see Appendix D.

The experimenter administered all language ability measures. The experimenter plus a second Observer rated and recorded all stress observations. The experimenter's ratings were used for assessment of rater reliability only, with data analyses based on the ratings of the second rater.[1] Both sets of ratings and observations remained available for clinical study.

Hypotheses 1, 2, and 3 are readily tested using the 3 Vocabulary scores, age, and the ratings from the behavioral observations. Hypothesis 4 can be tested by using the 7 language items from the rating scale, correlated with the 5 items on the quality of the behavioral response.

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[1]At the time of the observations, the second Rater was a Staff Psychologist at a state hospital, and a candidate for the Ph.D. degree in Clinical Psychology.

Results

Scales were developed in this study to assess: (1) the child's language development, with attention paid to general vocabulary level, vocabulary level for words that name emotions, and spontaneous use of affect-language; and (2) those aspects of a child's response to provocation which have to do with the control, modulation, flexibility, focus, and appropriateness of the overt response itself, and with the nature of language used in that response. The major hypotheses of the study concern predicted relationships between the language variables and response to stress, as seen in the children observed in the study.

Since all but one of the measures (WISC vocabulary subtest) were developed by the experimenter, analyses of these measures were conducted and their characteristics will be presented first. These analyses included assessments of inter-rater agreement on the 14-item Rating Scale that was applied to behavior in response to provocation, and assessments of inter-rater agreement between the two judges who ranked the Emotion Vocabulary test and the Spontaneous Affect Language Use test (as well as scoring the WISC vocabulary subtest). A second series of preliminary analyses was based on an item analysis of the interrelationships among the sets of items on the Rating Scale, and among some of the Rating Scale items and the three language scales. These latter analyses were undertaken in order to group items within

the scale where warranted, and also to gain further understanding of the make-up of a scale first developed for this study.

Measures of Reliability

(a) Language Tests: Two judges (not the experimenter) were used to score each child's language tests (without knowledge of which three sets of responses belonged to a single child). The WISC Vocabulary subtest was scored according to the standards in Wechsler's test manual (Wechsler, 1949). Inter-rater agreement between the judges, using Pearson's Product-Moment Correlation Coefficient, resulted in an r of .90.

The Emotion Vocabulary test and the Spontaneous Affect Language Use test were designed by the experimenter to assess, respectively, the child's specific knowledge of every-day emotion words, and the availability of such words for use when appropriate. The instructions given to the judges for ranking the two sets of protocols appear in Appendix D. In each case, the protocols were ranked from 1 to 12, with 1 assigned to the protocol with the best language definition or usage. Rank correlations were computed for each test, comparing the rankings of each judge. On the Emotion Vocabulary test, rank correlation resulted in a Rho of .87; rank correlation for the Spontaneous Affect Language Use test yielded a Rho of .61.

The three measures of inter-rater agreement were considered sufficiently high to establish workable reliability, and an average score for the two judges was then obtained for each child on each of the language tests, and used in all further analyses. However, since the reliability for the Spontaneous Affect Language Use test was not as high as would be desirable, some additional exploratory analyses were done following completion of formal testing, using each of the

judges scores alone in a test of the language-related predictions. These are discussed later.

(b) Rating Scale: Each of the 12 subjects in the study were observed 3 times, leading to a total of 36 observations, with each observation including a score for each of 14 items on the Rating Scale. A measure of inter-rater agreement for each item across subjects was obtained, using Pearson's Product-Moment Correlation formula, by comparing the experimenter's scores for all subjects with those of the other observer. Each subject's scores for each item of the scale (for each rater) were summed over the 3 observations, and inter-rater agreement assessed for each item with this summed score. The resulting correlation coefficients are presented in Table 1.

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Insert Table 1 about here
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Inspection of Table 1 reveals great variability in agreement, with correlations generally ranging from a low of +.31 to a high of +.89, with one notable exception, a negative correlation of -.31 for item #6. Item 6 was developed to assess the degree of the child's mastery of the situation as revealed in his behavioral response. Since all the other correlations were positive, consideration was given to dropping item 6 from all further analyses. However, two factors led to the decision to retain it. First, inter-rater agreement on items 3 through 7, the overt behavior items, was also measured by using the 5 ratings as one total score. In this case, each child was assigned 3 scores, one for each of the three observations, as a sum of items 3 through 7. Inter-rater agreement was then assessed for items 3-7 as a sum, over 36 incidents considered as independent events. This resulted in a correlation coefficient of +.71, which is significant at a .05 level

Table 1

Inter-Rater Agreement

A. Language Tests	Correlation Coefficient*
WISC Vocabulary	r = .90
Emotion Vocabulary	rho = .87
Spontaneous Affect Language Use	rho = .61

B. Rating Scale Item	
1	r = .67
2	r = .84
3	r = .44
4	r = .31
5	r = .75
6	r = -.31
7	r = .47
8	r = .62
9	r = .31
10	r = .93
11	r = .89
12	r = .77
13	r = .46
14	r = .88
Inter-rater agreement on the sum of items 3-7:	r = .71

*An r of .58 or higher, is needed for significance at a .05 level.

of significance. This sum was eventually used in testing the hypotheses, and inter-rater agreement for it is quite high. A second argument for retaining not only item 6 but also the other two items with low inter-rater agreement (items 3 and 4), concerns the high correlation of all of these items (3 through 7), with one another, when using only the Observer's ratings. These analyses are explored further below. As it was the observer's ratings alone which were used in all further analyses, the high level of inter-correlation among items was considered additional reason for using all items, despite the low inter-rater agreement on item 6.

Intercorrelations Between Items

(a) Rating Scale: The first task here was to look at the relationships among the 14 items of the Rating Scale. It will be recalled that this scale was designed to assess those aspects of a child's response which reflect its overall effectiveness and the way in which the child experiences and handles affect--in behavior and language. With this in mind, two major categories were set up (in addition to two general ratings concerning intensity of response and presence of language). The first category, consisting of items 3 through 7, assesses the focus (#3), organization (#4), appropriateness (#5), mastery (#6), and control (#7) in the child's overall behavioral response; the second, consisting of items 8 through 14,

assesses the language used in the response, specifically the language level (#8), the presence of affect words (#9), the focus of the language (#10), the child's access to language (#11), the function of the language (#12), language as a carrier of emotion (#13), and the degree of control in affect-language expression (#14).

The development of these various items represents an attempt to isolate various components of a response which are relevant indicators of affective aspects of the response. It was intended that each item represent one component, though each might or might not overlap with one or all of the others in its group of items (i.e. overall behavior or language). In order to evaluate this possible interlocking or independence of items, two sets of intercorrelations were computed, one composed of the relationships among the behavior items, 3 through 7, and a second the relationships among the language items, 8 through 14. Table 2 gives the intercorrelations among items 3 through 7, and Table 3 gives the intercorrelations among items 8 through 14. (The actual items, with instructions for ratings, are presented in Appendix B.)

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Insert Tables 2 and 3 about here
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Inspection of Table 2 reveals first that all correlations are in a positive direction. More importantly, with only 3 exceptions, they are all rather high, significant beyond a .05 level. (With 11 degrees of freedom, an r of .58 or higher is needed for significance at a .05 level in a two-tailed test.) The exceptions are the relationships

Table 2

Intercorrelations of Items 3-7, Behavior Items

	3	4	5	6
4	.56			
5	.64	.40		
6	.80	.61	.76	
7	.63	.34	.74	.80

Table 3

Intercorrelations of Items 8-14, Language Items

	8	9	10	11	12	13	14
9	.50						
10	.84	.40					
11	.85	.37	.88				
12	.65	.29	.66	.63			
13	.60	.72	.62	.59	.36		
14	.48	-.01	.47	.47	.40	-.05	

between item 4, organization of the response, and items 3 (focus), 5 (appropriateness) and 7 (flexibility of control). However, item 4 also correlates .61 with item 6, which is highly correlated with the remaining items, numbers 3,5, and 7. This high degree of intercorrelation among these items points to a probable commonality in the response which is being measured by all items, and it seemed wiser to use the items jointly rather than as separate components of the response. Thus, each subject's ratings on items 3 through 7 for any one incident were summed, and used as such for hypothesis testing.

Table 3 shows the intercorrelations between the language items, 8 through 14 of the Rating Scale. Inspection of this table also reveals a generally high set of correlations, with two correlations near zero but with others ranging to a high of .88. For the purposes of this study, items 8 through 14 were considered sufficiently related to each other to warrant their use as a compound score in further testing of hypotheses.

Closer analysis of Table 3 does reveal some possible item subgroups. Items 8, 10, 11 and 12 are highly correlated with each other, with correlations ranging from .65 to .88. A second grouping can be formed with items 9 and 13, which correlate .72 with each other, but have correlations of .60 and below with all other items. Finally, item 14 appears to stand alone, with its highest correlation ($r = .48$) with item 8, but with all a good deal lower than the other intercorrelations. Item 14 was developed to assess the degree of control expressed in the affect-language of the child. As with the other items, the potential range of ratings ran from a high of 1, representing appropriate

and flexible control, to a low of 6, representing either rigid or no control. However, unlike the other language items, there is no sensible way of scoring the degree of control in the language if there was no language in the response itself, or if there was no affect language. Thus, when this was the case, the child was arbitrarily assigned a rating of 6. It can easily be argued that this item loses meaning as a differential assessment when the child has no language in his response. Inspection of the descriptive protocols of the incidents following data collection revealed a considerable number of such cases. With this in mind, and considering the lower relationship between this item and the others, item 14 can be considered as a candidate for being dropped or otherwise changed in future use of the scale.

The next consideration is of items 9 and 13, which form a somewhat separable pair. A reinspection of Table 1, showing inter-rater agreement for the items of the Rating Scale, shows that of the language items (numbers 8 through 14) only items 9 and 13 fail to reach the .05 level of significance. However, of the 7 language items, these are the two specifically focused on affect as expressed in the language of the child, item 9 assessing the presence of affect words in the response, and item 13 assessing the language as a carrier of emotion. They can thus be useful in further research, in assessing differential use of language, given a sufficiently large output for such assessment. In the current study, language was frequently not present at all, and if present, was limited in scope and frequently redundant, making a closer assessment of it difficult.

The remaining group, items 8, 10, 11, and 12, consists of items

assessing the level of language used in the response, its focus, its function, and its accessibility to the child. These items are closely associated with each other, are likely to be measuring related aspects of the language present, and can be used as a core of a language scale. However, as noted, all items were used in the present exploratory study, since the overall level of intercorrelation was, in fact, moderately high.

(b) Other Measures: The second task in exploring the intercorrelations among the test variables was to assess the degree of relationship between those variables which would be used in the testing of the hypotheses of the study. These variables included Age, WISC Vocabulary, Emotion Vocabulary, Spontaneous Affect Language Use, and the language items of the Rating Scale. Table 4 presents the intercorrelations among these variables.

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Insert Table 4 about here
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The major purpose of this set of analyses was to assess the nature of the relationships among those items which would then be correlated with behavior under stress. Inspection of Table 4 reveals little correlation among these variables, with the exception of a high correlation of .86 between WISC and Emotion Vocabulary. While each can be used separately in testing Hypothesis 1, it is clear that the well-standardized WISC score has a considerable advantage. However, the high correlation between them suggests that little difference in result would be obtained in either case.

Table 4

Intercorrelations of Test Variables*

		Age	WISC	Emotion	Spont. Affect Lang.
Age:	Age				
Independ. Lang. Meas:					
	WISC	.25			
	Emotion	.27	.86		
	S.A.L.	.56	.10	.38	
Rating Scale Items:					
	8	-.27	-.10	.03	-.19
	9	-.70	-.37	-.36	-.44
	10	-.41	-.11	-.08	-.36
	11	-.30	-.07	.07	-.33
	12	-.34	-.44	-.31	.15
	13	-.39	-.56	-.56	-.48
	14	-.58	.44	.46	.36
Summed Lang. Items	8-14	-.41	-.19	-.06	-.19

*In order to simplify the reading of the table, all signs have been changed to accord with their correct interpretation. This was necessary since those measures which are based on Ranks (Emotion Vocabulary and Spontaneous Affect Language Use) and on Ratings (Language Items of Rating Scale) decrease with better performance, in contrast to Age & WISC scores which have naturally increasing values.

An interesting aspect of this set of correlations is the low relationship revealed between age and vocabulary. While one would certainly expect vocabulary to increase with age, there is only a minimal trend in this direction for the children in the present sample.

A measure of the relationship between language as rated in the observations and language as measured by independent scales was obtained by correlating each of the independent language measures with each of the 7 language items of the rating scale. The highest correlation here, was between item #9 and Age, which in fact measures a relationship similar to that of Age with Spontaneous Affect Language Use (item 9 is a measure of affect words used in the response). However, in this case the correlation is to be read to show that with increasing age there is less of a tendency for a child to use affect words in the provocative situation, whereas the relationship between age and Spontaneous Affect Language Use points in the opposite direction.

When items 8 through 14 were summed for each child, and summed over the three observations, and this total correlated with each of the 3 language measures and age, no resulting correlations were statistically significant, with Age retaining a modest negative correlation of -.41, and the language measures showing essentially no relationship. There was, then, no apparent relationship between a child's use of language in the test situation and his use of language in a stress situation on the measures used here.

It was next possible to turn to the testing of the hypotheses, with the following considerations in mind: (1) the criterion variable, behavior in response to a provocation, will be measured by the sum of

each child's ratings on items 3, 4, 5, 6, and 7; (2) the independent language measures to be used will be WISC Vocabulary score, and Rank Order on the test of Spontaneous Affect Language Use, using Rank on Emotion Vocabulary as an additional measure, but contributing essentially little in addition to the WISC measure; and (3) in using measures of language observed in response to provocation, items 8 through 14 will be summed and used as a composite measure of language in response to stress.

Tests of Hypotheses

Hypothesis 1: Hypothesis 1 stated that children with higher language levels would show behavior under stress that was more controlled, less diffuse, and more organized, and would also show more integrated use of language in the response. To test this hypothesis, each child's score on the WISC Vocabulary test was correlated with the sum of his ratings on items 3 through 7 of the rating scale, summed over the three observations. Since a "good" response on the Rating Scale is indicated by a low number while WISC scores increase with greater language ability, a negative correlation is needed for acceptance of the hypothesis. Using Pearson's Product-Moment Correlation, the analysis yields an r of .52, in a direction opposite to the predicted one. Substituting ranks on Spontaneous Affect Language Use for WISC scores and using Pearson's Product-Moment Correlation, the resulting correlation is .34, also in a direction opposite to that predicted, but showing less of a relation. Similarly, the correlation between Emotion Vocabulary ranks and items 3 through 7 yields an r of .35, in the direction opposite to that predicted.

Thus, not only is Hypothesis 1 not supported by the data, but the data point in the opposite direction: there is a tendency for those children who have higher levels of language (as measured independently from any stress provocation) to show behavior under stress which is less controlled, more diffuse, and less organized than the children with the lower WISC scores; and this tendency is also present, though less strongly, when specific knowledge and availability of affect words are used as the measure of language.

An additional aspect of Hypothesis 1 had stated that the children with the greater language ability would also show better language in the stress situation. However, in looking at the intercorrelations among test variables discussed above, it has already been noted that there is essentially no relationship between either WISC scores, Spontaneous Affect Language Use, or Emotion Vocabulary on the one hand, and the summed ratings on Items 8 through 14 on the other (see Table 4).

Hypothesis 2. Hypothesis 2 stated that, with increasing age, children would show more controlled, less diffuse, and more organized behavior in response to stress incidents. In making this prediction, it had been hoped that a sufficient range of ages would be represented by the children observed in stress incidents. However, over the six-month period that was needed to obtain 3 observations on each of 12 children, the majority of children rated were in the relatively small range between 9 and 12 years. In addition, ratings were obtained on one 5 1/2 year old, one 6 3/4 year old, and one 8 year old. Although this is not an adequately distributed sample of children from 5 to 12, Pearson's Product Moment Correlation was computed, correlating each

child's age in months with his summed score on items 3 through 7, summed over 3 observations. This yields an r of .68, which is significant beyond a .05 level of significance, but, as with Hypothesis 1, in a direction opposite to that predicted. Figure 1 shows this relationship in graph form, with the subjects presented in chronological order, with the sum of their behavior ratings on items 3-7, summed over 3 observations.

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Insert Figure 1 about here
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To reduce the weight of the few cases at the younger ages, an additional correlation was computed, with each age and each Rating Scale summed score assigned a rank order. The result, using Kendall's Tau corrected for ties, is -.42. Thus, even here, the relationship is in a direction opposite to that predicted, though failing to reach significance at the .05 level.

Hypothesis 3: The third hypothesis predicted that there would be an interaction effect between age and language ability, with older children in general showing greater language ability and also more controlled and organized behavior. It has already been noted in analyzing the intercorrelations between test variables, that age was only moderately associated with high language ability (See Table 4). The relationship predicted between language level and behavior was

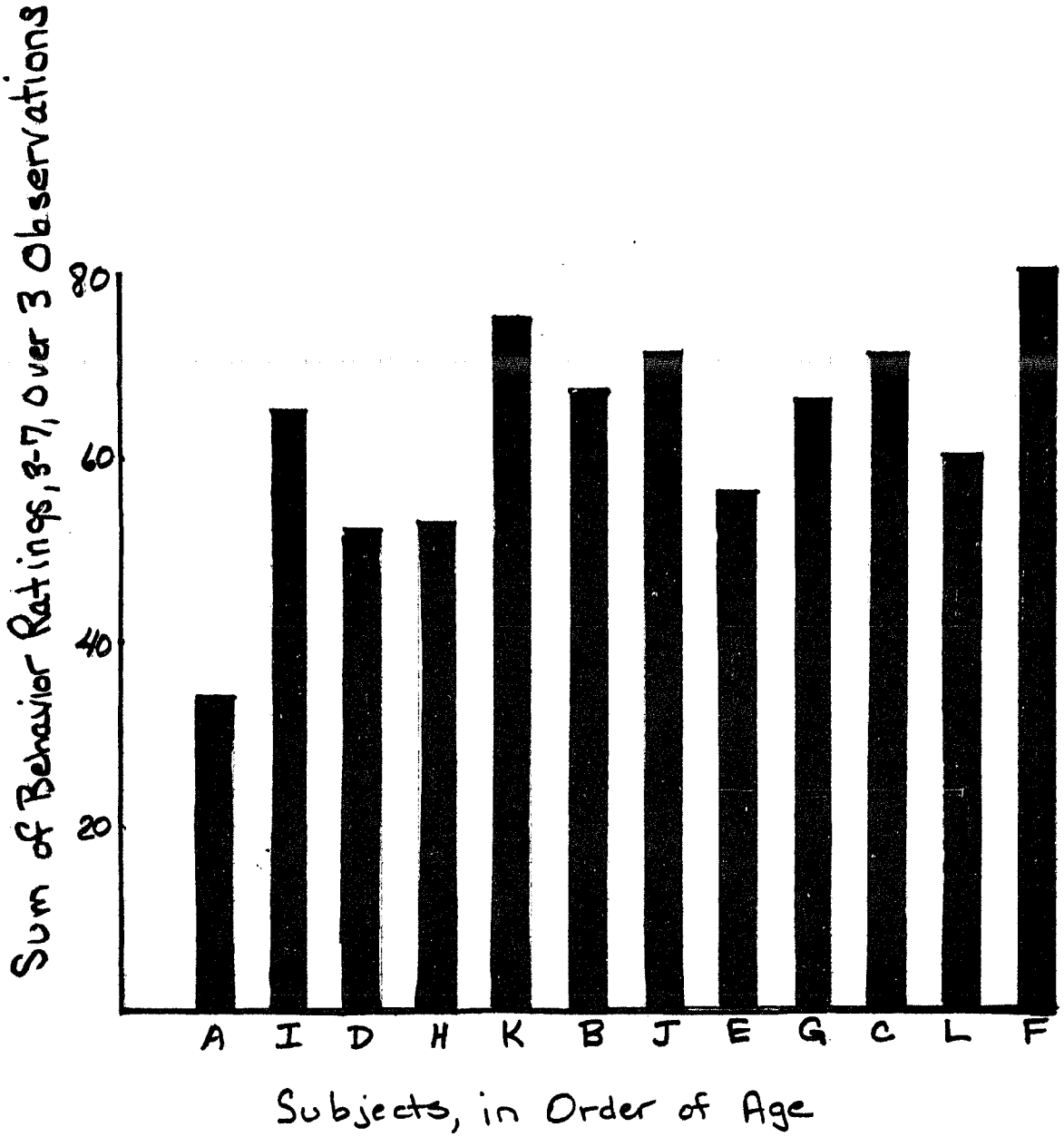

Fig. 1: Summed behavior ratings, as a function of age.

not supported by the data, which in fact point to a relationship in the opposite direction. In addition, the relationship predicted between age and behavior was not supported, with age strongly correlated with less adequate behavior. There seemed little reason, therefore, to continue with this analysis, and Hypothesis 3 was dropped from further study.

Hypothesis 4: Hypothesis 4 predicted that in an analysis of the stress observations for each child the quality of language use in response to a provocation would be associated in predictable ways with behavior in that situation, with better use of language associated with more controlled and organized behavior. In order to test this hypothesis, each child's behavior in a given episode (i.e. Rating Scale items 3 through 7) was compared with his language (items 8 through 14) in the same episode.

The Rating Scale data was obtained by one observer, with each part of the Scale (that is, Behavior items 3-7, and Language items 8-14) rated by the same person. Thus the data used in testing this hypothesis must be open to a strong possibility of bias. In developing this hypothesis, the expectation had been that if Hypothesis 1 was supported by the data, showing an association between high language ability and more controlled and organized behavior, this analysis would then provide additional within-subject information on the role of language during response to stress. However, in the absence of such a finding, a positive finding on Hypothesis 4 must be suspect as being heavily influenced by rater bias.

In fact, analysis of Hypothesis 4 yields a positive finding. Since there were 12 children observed in 3 incidents each, there was a total of 36 comparisons, 3 for each child. Using a product-moment correlation formula which compares each child's deviation from his own mean on his 3 observations, the resulting correlation ($r = .70$) is significant beyond a .05 level. Thus, for each child, when he was rated as using language well (relative to his own mean) in response to a provocation, he was also more likely to show behavior that was more controlled, organized, focused, and appropriate (again, relative to his own mean). Figure 2 shows this relationship in graph form.

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Insert Figure 2 about here
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For each subject, each of his 3 observations is plotted as a function of his sum on the behavioral ratings (items 3-7) and the sum of his language ratings (items 8-14). For the majority of subjects, one can see that the trend is in a positive direction, with scores on each axis rising together. (Rising scores here indicate poorer behavior and language.)

In addition, using each child's summed language rating on items 8-14, and his summed behavior rating on items 3-7, a correlation comparing these two scores for the 12 subjects yields a correlation coefficient of .59, also significant at a .05 level. This latter result

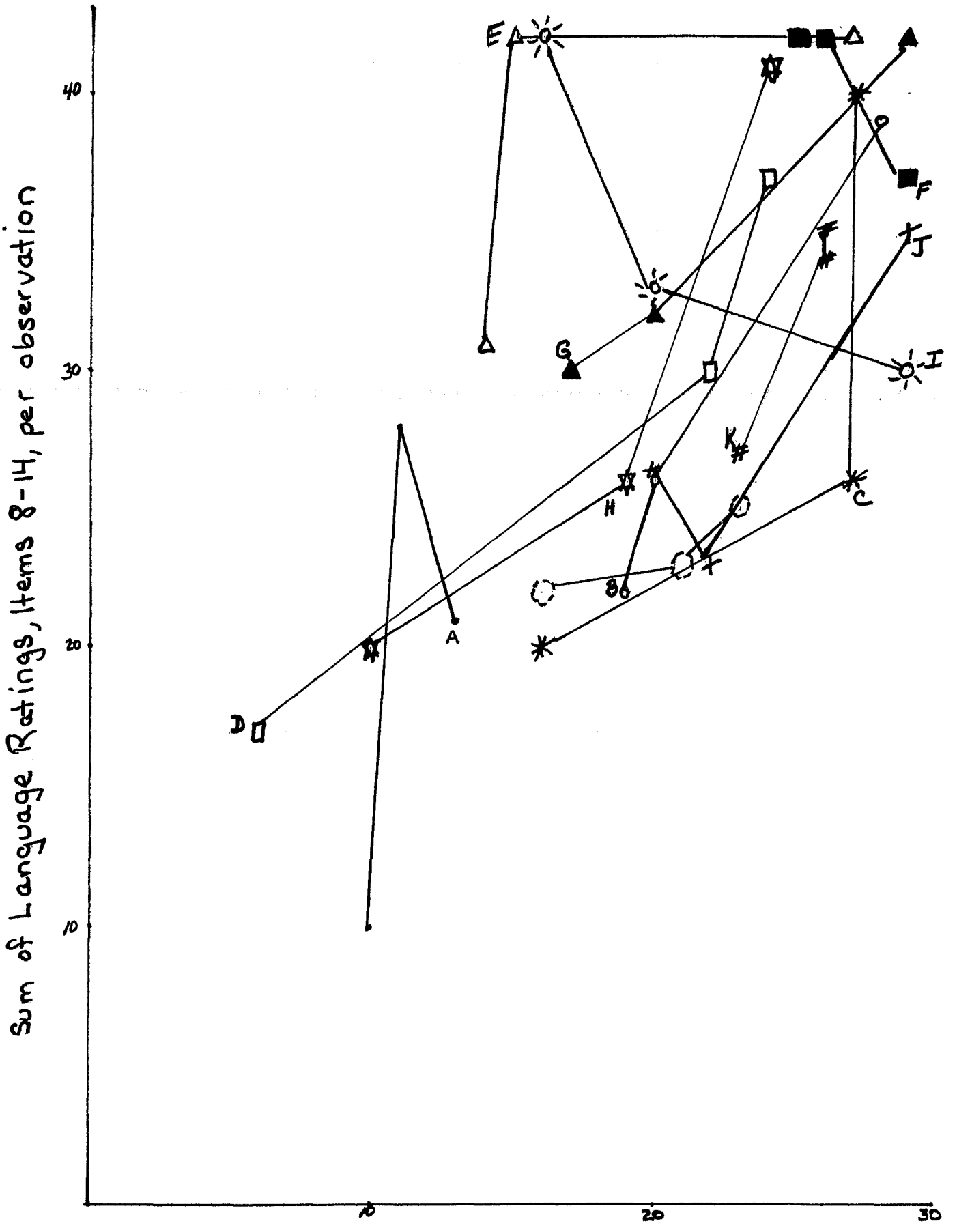

Fig. 2: Relationship between behavior and language for each subject on each of 3 observations.

indicates that, not only does each child show the predicted relationship (as above), but that the relationship holds for the group as a whole. Figure 3 shows this relationship in graph form. Here one can see that the general trend for the group as a whole is in a positive direction, with ratings on behavior increasing as language ratings increase (indicating poorer behavior coinciding with poorer language).

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Insert Figure 3 about here
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It can, of course, be argued that for any one incident, the observer has made an overall judgment of the quality of the response, which then influenced the rating of both behavior and language. While this possibility cannot be ignored, we should not automatically throw out the significant correlation, thus ignoring the possibility that it represents a true relationship. After all, the language tied to a behavioral response can well have a different relationship to it than general language level. There is some additional information that gives some support to the positive finding as a real one. It will be remem-

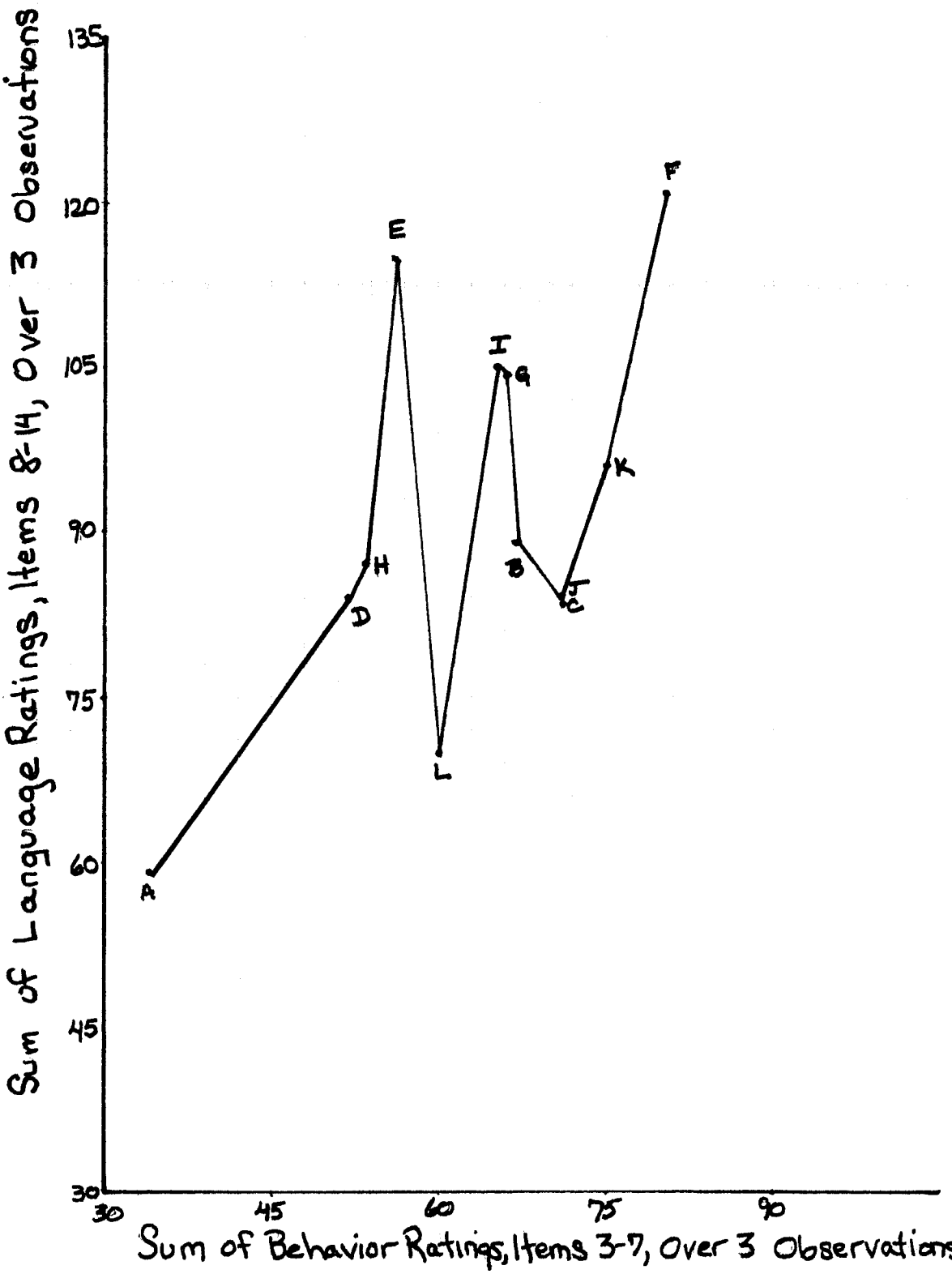

Fig. 3: Relationship between behavior ratings and language ratings for each subject, over 3 observations.

bered that in attempting to understand the relationship of the behavior items to each other and the language items to each other, two sets of intercorrelations were discussed (See Tables 2 and 3). These tables show fairly high relationships among the items within each group. There was, however, no table of intercorrelations set up across groups, comparing each of the language items with each of the behavior items. One can argue that if such a set of intercorrelations produces correlations of a lower order than those obtained within the two groups alone, then there is evidence of no systematic bias, cutting across all items and thus influencing the analyses of Hypothesis 4. Such a Table of intercorrelations was thus computed, and is presented in Table 5.

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Insert Table 5 about here
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Inspection of Table 5 reveals generally lower correlations, ranging from -.12 to +.83. Only 8 of the 35 correlations are above .58, the figure necessary for acceptance at a level of significance of .05. Reinspection of Tables 2 and 3 shows 7 out of the 10 intercorrelations of the Behavior items at a level of .58 or higher, and 10 out of the 21 intercorrelations of the language items at a level of .58 or higher. There thus appears to be some internal evidence to argue against any systematic bias in the ratings of the two parts of the Scale. This suggests, at the least, that one should not neglect the possibility that the analyses for Hypothesis 4 may be pointing to a real phenomenon, albeit further study, controlling for the possible rater contamination, would be necessary to ascertain this.

Table 5

Intercorrelations of Behavior and Language Items

	Language Items						
	8	9	10	11	12	13	14
Behavior Items							
3	.57	.40	.83	.72	.51	.64	.21
4	.01	.26	.21	.17	.06	.43	-.12
5	.52	.67	.51	.52	.62	.48	.30
6	.38	.68	.50	.42	.27	.75	-.11
7	.25	.37	.31	.33	.37	.38	-.08

Table 6

Correlations of Items 1 and 2 with the Behavior and Language Items

	Item 1	Item 2
Sum, 3-7	r = .09	r = .66
Sum, 8-14	r = .05	r = .73

Additional Explorations

In addition to the formal hypotheses, some further questions were explored. First, it will be remembered that in setting up the Rating Scale, two general ratings were designed, the first to assess general level of arousal, and the second to assess overall presence of language. In order to determine if either of these general ratings were associated with the more specific behavior and language ratings, 4 correlations were computed. In each case, a child's rating on one of the general items (1 or 2) was correlated with his summed rating for the others (either 3-7, his behavior, or 8-14, his language). Using the same correlation formula as that used in Hypothesis 4, each child's scores were compared with his own mean, for each of the 3 observations. Table 6 is a summary of the 4 correlations.

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Insert Table 6 about here
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Inspection of the Table reveals essentially no relationship between a child's rating of General Intensity and his behavior under stress or his language under stress. However, a child's rating on General Presence of Language is significantly related to the presence of organized and controlled behavior ($r = .66$), and to his composite production and use of language under stress ($r = .73$). This latter relationship, of course, must be interpreted as a consistency in the ratings of language; however, the former can be seen as again supporting the findings of Hypothesis 4: the presence of language in response to stress is positively associated with the presence of more organized and adaptive be-

havior. (This finding, too, is open to the same possibilities of rater bias; however, the assessment of simple presence of language seems less susceptible to subjectivity of judgment.)

A second area of interest is that of the relationship between psychopathology and the variables under study. The children observed did not all fall within one diagnostic category. They ranged from severe Behavior- and Impulse-Disorders to Psychosis. (See Appendix A for a summary of the characteristics of the sample children.) While there was no apparent evidence for a relationship between age and severity of pathology, it was possible to take a look at two sub-groups and their scores on the behavior and language variables. If one compares the four children with a diagnosis of Psychosis with the four children with a diagnosis of severe Behavior Disorder, there is a difference between these groups on language level (3 of the Psychotic group fall in the high language group, while 3 of the Behavior Disorder group fall in the low language group), and in the lowest score obtained on the behavior items of the Rating Scale (all 4 of the Behavior Disorder group have at least one incident with a summed behavior rating below 19, indicating relatively good behavior, while only one of the psychotic group has a rating below 19). There is then a parallel here to the formal analyses: age and a diagnosis of Psychosis are associated with higher levels of language and poorer behavior ratings, while younger children and a diagnosis of Behavior Disorder are associated with lower levels of language ability and better behavior ratings. These figures are not statistically significant (using a simple X^2 test), but suggest that the sample under study is an atypical one.

Finally, while questions concerning sex-differences and intelligence differences were raised as possible issues for discussion, lack of sufficient data precludes such possibilities. Questions of sex differences could not reasonably be studied with only two girl subjects. Indeed, the number of girls on the ward at any one time is always considerably less than that of boys, and so it is not surprising that this is reflected in the make-up of the study sample. Questions of the relationship of intelligence to the other measures are also difficult to study. Of the 12 subjects, full scale IQ's were available for 8, indicating a rather small range from 71 to 93. A conversion of the WISC raw scores into Scaled Score form does give an estimate of language level controlled for age for every child. This information is contained in the summary of sample characteristics in Appendix A. However, the range of scaled scores is far greater than that observed in those Full Scale IQ's available, suggesting that for this sample Vocabulary level is an exceedingly unreliable indication of general intelligence level. Indeed, rough inspection of these scaled scores, in relation to the behavioral ratings on the Rating Scale, indicate no systematic relationship.

The formal results of the study can then be summarized as showing: (1) no support for the hypothesis of a significant relationship between high language ability and more organized and controlled behavior in response to provocation; and some support for its inverse, a relationship between high language level and more disorganized behavior in response to stress; (2) no support for the hypothesis of a significant relationship between age and more controlled behavior, and support

for the inverse, a relationship between older age and more disorganized and uncontrolled behavior under stress; and (3) a relationship between effective and appropriate use of language and more organized and appropriate behavior in response to stress at a given moment in time, a relationship that, while hardly confirmed in the present study because of possible rater contamination, cannot be discounted for the various reasons discussed above.

Following the formal tests of hypotheses, additional analyses were made using the Examiner's ratings, and using each of the two judges rankings on the Spontaneous Affect Language Use measure (where the test of inter-rater agreement yielded a rho of .61), in order to assess the possibility of greater sensitivity to the Rating Scale and sample children yielding results in a more positive direction. Using Kendall's Tau with correction for ties, correlations were computed in tests of Hypotheses 1 and 2, the hypotheses relating behavior to independent language assessment and to age. In all instances, the correlations yielded results showing essentially no relationship between the variables: between language and behavior under stress, or between age and behavior under stress. In the former analyses, correlations ranged from -.17 to +.12, with essentially no variability as a function of using the Ranks or Scores of the two judges separately. The analysis of the relationship between Age and Behavior, using the Experimenter's ratings, yielded a Tau of -.20. There is thus no support for the possibility of increased knowledge of the sample children or of the make-up of the rating scale leading to more positive or significant results.

Discussion

In seeking to understand the data observed in this study, the nature of the study sample must be kept in mind. It is clear that in choosing to observe a group of children in a City Hospital emergency psychiatric ward, one has already isolated a highly specialized group of children. In particular, they form a group of essentially lower class children, with relatively low IQ's, in addition to manifesting behavior sufficiently disturbed or deviant to warrant emergency hospitalization. One must, therefore, consider the possibility that if children do in fact benefit from language as others have pointed out, these children do not.

The negative relationship obtained between language ability and behavior under stress is a difficult one to understand. It runs counter to clinical expectation, as well as to those studies presented earlier. Of course, considering the small number of children studied and the narrow range of some variables (e.g. age, intelligence level, degree of pathology), the present study can hardly be regarded as definitive. While the finding of a relationship between the language use and behavior quality under stress is an intriguing one, varying as it does from incident to incident for each child, the issue of possible rater bias is too real to warrant its acceptance without a better-controlled replication. With these reservations in mind, however, it is of interest to speculate about some of the factors that may have con-

tributed to the particular behavior observed in this study.

One area of speculation concerns the possibility of a differential relation of language to behavior for different age groups within the population observed. For example, there is a small but positive correlation (+.25) between age and vocabulary level, suggesting that when language is assessed in a relatively unstressful situation, older children have learned more and have a wider vocabulary range than younger children. However, a correlation of Scaled Scores on the WISC with Age results in a r of -.04. This suggests that although the older children have a somewhat higher "absolute" vocabulary, when vocabulary is considered in terms of age-appropriate expectations, there is no difference between the older and younger children. Furthermore, assessment of language under stress shows older children to have less facility and availability of language. It appears that they suffer more disorganization--both behavioral as well as verbal--than the younger children. The younger children, on the other hand, do not do as well on independent language assessment, yet under stress both their language and their behavior are more organized, appropriate, and focused. A possibility is that it is just this relationship, between language and behavior, which is particularly vulnerable to stress, and which, given the presence of psychopathology, is quick to break down. One might argue that in the younger child, the relationship between language as an ego function (i.e. as a means of control) and behavior is not yet fully established. Thus, for this younger child, language ability <u>per se</u> (i.e. as measured through vocabulary tests) will not be able to predict behavior, but rather it is other factors, for example, other

defenses or coping mechanisms, which may or may not be used in controlling behavior. As the child gets older, we would expect to find language used more in this internalized "control" function. Yet, for the children in this study, it appears to be just this relationship or function which is unavailable. While the analysis of Hypothesis 4 points to the possibility that for all age ranges the actual presence of language in response to stress coincides with more controlled and appropriate behavioral response, in general it was the younger ones for whom this worked most often, since it was the younger ones who in general showed the more adequate behavior.

A second possibility for understanding this differential responsiveness concerns the nature of the stress incidents themselves. In order to explore this, each incident was placed in one of three categories: (1) verbal stress; (2) physical stress (assault or threatened assault); and (3) miscellaneous (including such stresses as disappointment at not seeing a therapist or going out to play, loss of a toy, incidental disturbance while watching a TV program). Study of these groupings showed 7 incidents in category (1), 19 incidents in category (2), and 10 incidents in category (3). Further observation then revealed the following: (1) each child had incidents in at least two of the three categories; (2) all age ranges were represented in all three groups, with the youngest age group somewhat under-represented in the verbal stress category; (3) categories (2) and (3) yielded behaviors rated from a low of 10 (i.e. an average rating of 2 on each of the 5 items, representing particularly "good" behavior) to a high of 29, the highest rated score obtained (and representing the poorest behavior).

Category (1), Verbal stress, showed a range from 17 to 27, suggesting that Verbal stress tended to elicit slightly more disorganized and uncontrolled behavior. An interesting problem is then revealed in this data. Clearly, physical threat or actual assault was a major precipitant of all kinds and levels of response. In setting up the study, it had been anticipated that rating would begin as soon as a stress was identified by both the observer and the experimenter. However, it was difficult at times to decide on a clearly isolated stress independent of the beginning of an affective response. Physical assault, however, never presented this problem, and there is a majority of incidents in this category, as well as the greatest variation in the quality of responses to it. It may be that a large number of other types of stress was missed as a function of the difficulty in defining as "stress provocation" that which did not clearly evoke stress. This was particularly evident in one situation that recurred frequently when the children were all together in the Ward Day-Room. Activity level would be extremely high. Children would be actively engaged in horse-play, teasing, being teased, and showing evidence of great fun. Yet, it was impossible to isolate, during such times, specific "incidents," although general "affect" level was high. Therefore, such incidents are totally unrepresented in the data obtained. Only if a child was hurt or frightened during such activity did his behavior come under specific observation. It is thus impossible to know if the relationships observed between age or language level and behavior would also carry over to other qualities of stress or indeed other affective responses.

Another factor influencing the representativeness of the data only became evident toward the end of data collection. At any given time, there were between 15 and 20 children on the ward, with a turnover rate of approximately 3-4 per month. Some children were on the ward during the entire length of the study. Yet, many such children, or others, never entered the study sample since they never became the "recipient" of a stress incident. Only those children who were "done to" could enter the study sample. A rough count yielded at least 10 such children, who were around during data collection, were observed perhaps once, yet failed to have three incidents for observation and rating. Further inspection showed that 9 out of 10 specifically noted children were 10 years or older, the 10th being 8 years old. They do not differ from the other children on degree of psychopathology or reasons for admission, yet they were more likely to be observed causing stress than being stressed. The question then arises as to the characteristics of the study sample children which made them more likely to be observed under provocation. It is a common phenomenon of ward life for younger children to be the scapegoats of the older ones. Thus, there may be no special characteristics of the younger children who entered the study. However, for older children to be sufficiently provoked to achieve 3 observations, they may need to show some characteristic vulnerability. Perhaps it is just their vulnerability to stress, their inability to retain elements of control in their response, which leads to (1) the persistent attacks by their peers, and (2) a rating of less adequate behavior in the present study.

It will be recalled that the basic thesis of the study is that

language skills, independent of situational factors, will aid a child in handling affective stress--that language is, in fact one of the tools used by the ego to control the experience and expression of emotion. The findings here suggest that for this group of children, this was not the case.

In attempting to speculate about this negative finding, and to put it in perspective with the possible relationship between language use and organized behavior at specific moments in time, it is of some interest to turn to Behavioral theory for an alternative view. From this vantage point, one may assume that language, as all other behavior, is a specific response, not subject to any special rules. When specific cues are given, as in a vocabulary test, specific responses are elicited, different from child to child. Thus we get a range of language "scores." In the various stress incidents, other more complex cues are given, and again, different responses are elicited from child to child, and even from incident to incident. What appears as constant is the totality of the child's response at any given time. Thus, organized behavior seems to appear conjointly with more organized language. What this suggests is that the children have learned (or not learned) particular styles of responding to varying situations, and language level _per se_ as an internalized structure, is a meaningless indicator. Rather than language level, what one might study is the totality of a child's responsiveness to stress, to understand the shifts in control and organization from incident to incident, and child to child.

It has been considered, for example, that when children develop with relatively limited language skills, it is the motoric sphere which

becomes the preferred or dominant one. One would then expect these children to have developed a certain expertise in handling events with overt behavioral responses. This may, in fact, hold up for children with similar backgrounds to those observed here, but who have not had to be hospitalized, as is suggested by the studies described earlier. However, if one considers Shachter's work, it is the verbal or cognitive labelling of events that one must see as critical in the development of appropriate affective responses. If these study children, then, have difficulty in labelling consistently, or accurately,--either events in the environment or their own visceral experiences--their behavior is also likely to be highly variable. This is, in fact, how they appeared in the study, with responses varying from incident to incident. They may actually be able to deal moderately well with verbal events verbally, as they appear to do in isolated tests of language (though still low in comparison to a general population). However, if this skill has not been transferred to spontaneous interpersonal events, their behavior will suffer accordingly. Indeed, it is just this sphere--interpersonal behavior--that has developed with gross inappropriateness or maladaptiveness, necessitating their hospitalization.

What remains unaccounted for, however, is the surprising relationship found between high language ability and poor behavior in response to stress. While the earlier discussion attempted to understand this for the study sample, it is difficult to generate explanations, from within either theoretical position, that make sense in a total framework for a general population.

Appendix A

Summary Characteristics of Children in the Sample

Age	Ethnic Background	Diagnosis	WISC Vocab.[2] Scaled Score	WISC Full Scale IQ	Emotion[3] Vocab.	Spontaneous[3] Affect. Voc.
A. 5 1/2	Puerto Rican	Borderline	3	85[4]	11.5	9
B.[5] 9 3/4	Black	Schizophrenic	4	73	6.5	9
C. 10 1/2	Black	Psychotic	6	93	3.0	1
D. 8	White	Beh. Disorder	8	--	1.0	7.5
E. 10	Black	Beh. Disorder	2	75	7.0	9
F. 11 3/4	Black	Psychotic	4	--	5.5	3
G. 10 1/2	White	Psychotic & Brain Injured	1	--	9.0	3
H. 9 1/4	White	Schizophrenic	4	--	5.5	10
I. 6 3/4	Black	Beh. Disorder	6	71	11.0	9.5
J. 9 3/4	Black	Psychotic	10	84	2.0	9
K.[5] 9 1/2	Puerto Rican	Psychotic	3	80	5.5	3
L. 11 2/3	Puerto Rican	Beh. Disorder	0	72	10.5	5

[1]Age computed at time of language testing.

[2]Scaled score based on raw score average of two judges.

[3]Presented as average rank on basis of rankings of two judges.

[4]IQ obtained from Wechsler Preschool and Primary Scale of Intelligence.

[5]Female subjects

Appendix B

Rating Scale

This scale consists of 14 items, each with 6 points. In each case, the criteria for a rating of 1 and of 6 have been spelled out. Where possible, anchor points for ratings in between have been spelled out. However, this has not always been possible. It should be understood that the behavior (or language) to be rated on each item is considered to fall on a continuum from 1 to 6, and ratings should be made accordingly.

1. General Rating: Intensity

In terms of the immediately preceding baseline activity level of the child, his current total response:

(1) Deviates markedly--either in increase or decrease (and note which)--in overt behavior and/or language, considered as a total response.

(2-5) From: Is sufficiently different from ongoing activity to draw attention from others even if provocation was not noticed;

To: Shows mild differences from ongoing activity level.

(6) Is not different at all in activity level from ongoing behavior.

Circle one:

1 2 3 4 5 6

2. General Rating: Language/Behavior Ratio

Considering the response as a whole, language (exclusive of non-verbal vocalization) is used:

(1) As the major mode of response, more than twice as much as the overt behavioral response, whether language is high or low in absolute quantity. (This is a ratio response, and language is rated totally in relation to the overt behavior which also may be high or low in absolute quantity.)

(2-5) From: As part of the response, perhaps equal to or slightly more than, overt physical response;
To: As part of the response, but with much less importance than overt physical response. Consider also such things as the rate of subsidence of language vs. behavior.

(6) Minimally, if at all, with overt physical behavior as the major response. Responses may be all overt action, or with any vocalization essentially non-verbal, as in distress cries without real words.

Circle one:

1 2 3 4 5 6

3. Focus

Considering the overt behavior of the child, with reference to the specificity of the provocation, this child's response is:

(1) Highly focused and specific to the initiator and to the kind of provocation; for example, a response limited to taking back a toy (when that has been the provocation); or hitting back a child; or verbally replying to a verbal taunt. (All of these are specific in degree, in kind, or in direction to the provoking situation.)

(2- From: Primarily focused or specific, though perhaps inter-with periods or aspects of diffuseness;

5) To: Primarily non-specific and diffuse, with perhaps occasional moments of focus.

(6) Entirely diffuse in nature, and may never refer to specific initiator or nature of provocation. For example, the child may show diffuse screaming or crying with no attention to the source of provocation; or the child responds with a full temper tantrum; or with rigidity or 'shock.' Rate here also the child with no overt response to a clear provocation.

Circle one:

1 2 3 4 5 6

4. Temporal Organization of Response

With respect to the organization of the response (defined as the co-ordination of the parts of the response with one another and/or a shift in the response with varying conditions of the provocation over time--that is, a coordination of the response with the external reality), from the time of the initial provocation to approximately 5 minutes later, the behavior of the child:

(1) Is organized to begin with and remains so until its termination (or until 5 minutes have passed).

(2- From: Becomes increasingly more organized over time and/or is primarily organized with only minimal "extraneous" behavior;

5) To: Remains relatively unorganized over time or may start in a relatively organized way but becomes increasingly less so, with almost no residua of organization--i.e. coordinated response parts.

(6) Becomes increasingly disorganized over time or remains totally disorganized for the entire time. For example, the child may start with a minimally directed response at the origin of the incident, but then continue with diffuse crying, in intense confusion, with no observable residua of organization.

Circle one:

1 2 3 4 5 6

5. Appropriateness of Response

This rating is essentially an evaluative one. That is, it is based on the clinician's ordinary standards of appropriateness of response, defined in terms of social standards and clinical well-being. In these terms, this child's response is:

(1) Appropriate, with respect to overt actions as well as intensity of response and affect demonstrated. This may even be relatively unfocused or disorganized if the provocation is well beyond the child's coping resources.

(2- From: Essentially appropriate,
5) To: Essentially inappropriate, in terms of the rater's judgment of the opportunities in the total situation (including the child's resources) and the amount of the total behavior that reflects appropriate or inappropriate reactions.

(6) Inappropriate, and essentially outside of the boundaries of good reality testing. For example, the child may giggle in response to a physical attack; or the affect may be clearly "wrong;" or the response may be magical in nature.

Circle one:

1 2 3 4 5 6

6. Mastery

Mastery involves effectively coping with a challenge. The sense of mastery may be an appropriate affective response to the recognition of such mastery, but may also be based on denial or magical thinking as a replacement for any effective mastery at all. Considering the child's own sense of competency and mastery in the situation, the child:

(1) Shows effective mastery in the situation within appropriate, adaptive reality limits, and has a strong accompanying sense of this mastery.

(2- From: Shows relatively effective mastery,

5) To: Shows relative absence of mastery. Consider such things as: amount of hesitation in responding; amount of checking (behaviorally and/or verbally) with nursing staff or other adults present; level of accompanying anxiety.

(6) Is essentially paralyzed with anxiety, with no coping responses available, or shows a magical "sense of mastery." For example, the child may become rigidly perseverative; or continually check with adults; or his response may not be in touch with reality at all.

Circle one:

1 2 3 4 5 6

7. Flexible Control

Considering the possibilities of control in an affective response, from flexible control allowing for some affect-discharge to inflexible control (either rigid over-control allowing no discharge or total lack of control permitting unrestrained impulse discharge), the behavior of the child is:

(1) Characterized by modulated expression of affect, where the expression is appropriate in intensity and quality, though not necessarily tied to appropriate or goal directed (focused) behavior, and is clearly expressive in vocalization and overt behavior.

(2- From: Characterized by relatively flexible control,
5) To: Characterized by relatively inflexible control. Consider such things as: degree of modulated expression of affect; rigidity of behavior; degree of discharge in behavior or vocalization.

(6) Primarily discharge in nature, with no controls in evidence, or completely rigid, allowing no discharge or expression of affect. Rate here behavior that is essentially inflexible, in one extreme or the other. The response may reflect pure discharge, as in wild crying or tantrum-like behavior; or it may be rigid or perseverated, with freezing or blocking of behavior or speech. The response may also be so intellectualized that no affect is expressed.

Circle one:

1 2 3 4 5 6

8. Language Rating: Language Level

Considering vocabulary level and range (but not total amount of language usage per se), as well as variety of sentence structure used in the total verbal response, the child's language shows:

(1) High degree of variability and range of vocabulary, with much variety of sentence structure used.

(2- From: Some degree of variability and range of vocabulary, with some variety in sentence structure;

5) To: Limited range and level of vocabulary, with some perseveration in use of sentence structure and words.

(6) Very small range of vocabulary, with great perseveration of vocabulary as well as sentence structure. The child may show totally perseverated vocalization, or non-verbal vocalizations, or silence.

Circle one:

1 2 3 4 5 6

9. Language Rating: Affect Words

In the total response, affect words--words expressing subjective feeling--are:

(1) Present and play a major role in the verbal response. Rate here if words are either articulate affect words (as in affect vocabulary list) or words purely expressive in nature (e.g. curse words).

(2- From: Somewhat present,
5) To: Very limited use of affect words. Consider not only the absolute amount but also whether the affect words used are an integral part of the child's language.

(6) Not present at all; response may be a silent one, or consist of non-verbal vocalizations as in distress cries, or response may be a verbal one but without any use of affect words as defined above.

Circle one:

1 2 3 4 5 6

10. Language Rating: Focus

On a dimension from focused to diffuse, with focus defined as the language being (a) linked to and coordinate with the child's behavioral aims in the situation, whatever they may be, and/or (b) directed at the provocator or the source of provocation, language in the situation is:

(1) Primarily focused and concordant with the aims of the behavior and/or directed to origin. (Note: Even if behavior is diffuse, if language is focused at source of provocation, rate here.)

(2- From: More focused than diffuse;

5) To: More diffuse than focused. Language here is mostly emitted without reference to the origin of provocation or behavior.

(6) Primarily diffuse--with no relation to behavior and/or the source of provocation. (A highly verbal response that is not at all focused can be rated here.)

Circle one:

1 2 3 4 5 6

11. Language Rating: Access to Language

(This overlaps to some extent with Affect Language (#9) and language level (#8) but, as a more global rating, is intended to capture something additional.) In the stress situation, considering the degree of the child's capacity and tendency to find words to express his feelings and/or his aims in the situation, the child:

(1) Can clearly, and with some precision and frequency, make his feelings and wishes known in words. Words are present and little difficulty is noted in flow; words are connected to feelings and/or aims.

(2- From: Less clearly, and with less precision and frequency, the child can make his feelings and wishes known in words;

5) To: Has trouble finding words to express his aims or feelings. Consider difficulty child has in word-searching, or articulation (e.g. is there stuttering or much hesitation?).

(6) Cannot or does not find words expressing his aim and/or feelings, and may only emit distress calls or resort to "magical" or nonfunctional language.

Circle one:

1 2 3 4 5 6

12. Language Rating: Function

Considering whatever language or vocalization the child does use in the situation, without regard to the amount of same, the function of the language is:

(1) Adaptive, appropriate and problem solving with regard to the provocation--and in the observer's judgment, whether the response is a call for help, making a plan, a verbal attack, or something else.

(2- From: Not fully adaptive, appropriate, or geared toward problem solving,

5) To: More inappropriate or mal-adaptive than appropriate.

(6) Non-adaptive, inappropriate, magical, or otherwise unrelated to the problem solution. Rate here, for example, when a small child, in the face of attack by a larger child, makes a grand scale verbal attack with reference to impossible actions; or a child refers to magical solutions; or the child launches a grand scale verbal assault as a response to a mild or accidental provocation; or the verbal response has nothing to do with the particular incident.

Circle one:

1 2 3 4 5 6

13. Language Rating: Language as Carrier of Emotion

In distinction from Item #9, which refers to affect words per se, this item refers to the integration of language and affect. Given a stress situation, where some feelings are likely to be aroused, this child:

(1) Shows language that conveys the feelings and can do this with some frequency (without regard to the extent of appropriateness or control--i.e., without regard to whether the language is fused with or suffused by emotion). Rate here language referring to feeling states, or language containing "feeling words" as in cursing.

(2- From: Can sometimes show language that conveys the feelings;

5) To: Can rarely show language that conveys the feelings. Language may be mostly intellectualized, or just barren of references to feelings.

(6) Either cannot find language for feelings at all or can find language that is highly intellectualized and devoid of feelings. Language avoids reference to feeling state, in words or in tone.

Circle one:

1 2 3 4 5 6

14. Language Rating: Degree of Control in Affect-Language Expression

In Item #13, language was rated according to its integration with affect expression, specifically without reference to the dimension of control. Here, language used in the control of affect expression is in focus. Given a stress situation where feelings are likely to be aroused and considering language usage in that situation, this child:

(1) Shows language where the feelings are controlled, without regard to whether this control is rigid and inflexible or modulated and appropriate.

(2- From: Shows some language where the feelings are controlled,
5) To: Shows language with some flooding with feelings.

(6) Shows language and other vocalizations that are flooded by feelings, where language serves only as a form of diffuse vocal discharge. Language may appear as a stream of expletives flooding out.

Circle one:

1 2 3 4 5 6

Appendix C

Affect Vocabulary

1. Happy
2. Angry
3. Sad
4. Jealous
5. Nervous
6. Afraid
7. Sorry
8. Hate
9. Lonely
10. Ashamed
11. Love

Appendix D

Instructions to Judges for Ranking Affect Vocabulary Protocols

You are being asked to judge each child's capacity to find words to describe the feelings implied by each of the 11 affect words. Your task is to rank the protocols from 1 to 12, with position number 1 assigned to the child who is most able to do this. You will have to read through all 12 protocols to gain an overall impression of the range of definitions offered before beginning to assign each its relative ranking. In making your assessments, the following can be used to guide you in an informal assessment of <u>each</u> definition and thus aid in arriving at a total judgment of the particular protocol:

Has the feeling connoted by the word been translated or incorporated into the language used to define it? Can the child go back and forth between feeling and language, or does he get stuck in language that loses the feeling, or conversely, in vocalizations purely emotive and without ability to convey meaning or understanding? Is the child's definition a precise and articulated verbal account conveying the particular feeling, or is his language too vague, or perseverated, or wrong?

Instructions to Judges for Ranking Spontaneous Affect Language

You are being asked here to make an assessment of each child's tendency to use affect words appropriately and spontaneously in accurate perception and interpretation of an interpersonal situation. The child has been asked to describe 3 different TAT pictures, and you are asked to rank the protocols from 1 to 12 on the quantitative and qualitative use of affect words in the protocol.

Criteria for assessment include: the number of words describing feeling states; the presence of feelings ascribed to the people in the pictures; and the presence of a description which is accurate for the picture and includes a situation that involves feelings.

As in judgment of the Affect Vocabulary protocols, you will need to read through all the protocols before beginning to assign relative ranks to each of them. The criteria stated above may be used to guide you in informal ratings on each of the 3 responses for each child to aid in your final rank orderings.

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