SOCIAL COGNITION IN PRESCHOOL CHILDREN:
AN EXPLORATORY STUDY

by

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Chapter I

Statement of the Problem

The general purpose of this study was to explore some aspects of social cognition in young children. More specifically, the research was designed to examine the sensitivity of preschool children to imbalance in small scale social systems.

Background and Theory.

Social cognition. Over the past twenty years, the area of social cognition, sometimes referred to as social judgment, social perception or person perception, has steadily grown in importance. Beginning with the early work of Asch (1946) concerning the organizational characteristics of social judgments, and going up to the recent work of Heider (1967) studying social judgments of artificial social objects (geometric forms), two decades of empirical investigation supply evidence of how people perceive and make social judgments of others. Much of this research is characterized by drastically different methodologies. Asch (1946) read lists of traits belonging to a person to a group of subjects who were to form impressions and write a brief account of this particular person. Gollin (1954) used a motion picture with a single actor behaving in various ways, and then asked his subjects to write impressions. Instead of using people as stimulus objects, Heider has, for some years, worked with artificial social objects (Heider and Simmel, 1944; Heider, 1967). His geometric figures are presented to S_s via a moving film sequence. Most S_s see the figures as animated beings and their movements interpreted in terms of human attributes.

Despite the different methodologies, each line of investigation indicates that the impressions one forms are dependent upon organizing processes. In this organization it is easy to see that "good" things go together and "bad" things go together. Thus, a general evaluative set is known to influence the organization of social stimuli. However, the major development in this area has been general theories of cognitive organization that revolve around the premise that humans have a need for cognitive consistency. These theories include the congruity model, dissonance theory and the balance model. Although these three basic notions differ among themselves on several points, all agree that it is the tension produced by inconsistency that instigates change and that this change is in the direction of restoring the cognitive system to a state of consistency.

The congruity model, developed by Osgood and Tannenbaum (1955), has been applied to the study of attitudes and predictions of attitude change. Briefly, the model deals with objects of attitudes and the bonds which link them. One has attitudes about people, ideas, etc., which are the objects of the attitudes. The objects can be quantified on a continuum of +3 to -3 and the bonds can be of two types: associative and dissociative bonds (expressions of disapproval) link objects that have the same numbers but opposite signs. For example, an NAACP official (+3) attacking the position (dissociative bond) of the Ku Klux Klan (-3). There is consistency when associative bonds are created between objects at the same value positions (with like sign). All other states are incongrous, hence they will create tension and initiate some change in the immediate psycho-social environment. A more complete statement of the congruity model can

be found in Osgood, Suci and Tannenbaum (1957).

The theory of cognitive dissonance (Festinger, 1957) is much like the congruity model discussed above. Dissonance is the term for di equilibrium and consonance has the same meaning as equilibrium or bal in the prior model. Dissonance theory states that two elemes are dissonant if one implies the negation of the other, i.e., if A implies not B. If A implies B then the two cognitive elements are consonant and there will be no tension or discomfort in the cognitive system. The interested reader is referred to Brehm and Cohen (1962) for a review of the many studies conducted within the framework of dissonance theory.

Balance theory (Heider, 1958) also stresses cognitive equalibrium. Heider pointed out that causal expectations must be congrous with respect to related objects in order for cognitive stability to exist. "For a state of complete cognitive harmony to exist, the various implications of a person's expectations or judgments of any one aspect of the cognized environment may not contradict the implications of his expectation or judgment in respect to any other aspect of the cognized environment (Deutsch and Krauss, 1965, p. 33)." Heider's formulation of balance deals with affective liking and disliking ("L" and "DL") and also unit-forming and unit-segregating relations ("U" and "not U"). Unit-forming relations include causality and ownership while unit-segregating relations include the opposite. For balance to exist, a positive unit relation calls for a positive sentiment (affect) relation (L implies U). Of course, the opposite is also an instance of balance: a negative sentiment relation calls for a negative unit relation (DL implies not U). This model is equally appropriate to social situations as it is to attitudes toward

objects. Considering three socially interrelated persons; an instance of balance could be one in which "A" likes "B" but dislikes "C," "B" also dislikes "C" but likes "A." In this example, all three parties are in a state of cognitive balance (assuming that "C" dislikes both "A" and "B"). An illustration of imbalance could be a situation in which "A" likes both "B" and "C" but "B" and "C" dislike each other. Thus "A" is left in a state of imbalance and will move toward producing a change in his perceptual-cognitive field. Balance could be achieved in several ways. "A" might decide that he really doesn't like "B" (or "C"), or "A" could distort reality and see "B" and "C" liking each other. Although there are several ways an imbalanced situation can be made consistent, balance theory contends that, "In general, the nature of the cognitive changes resulting from an imbalance will tend to produce the most congruence and the least changes in the perceptual-cognitive field (Deutsch and Krauss, 1965, p. 33)."

Thus the three major models are similar in that they ". . . assert that a person attempts to perceive, cognize, or evaluate the various aspects of his environment and of himself in such a way that the behavioral implications of his perceptions shall not be contradictory (Deutsch and Krauss, 1965 p. 68)." The basic concept of what we shall call (following Heider) cognitive balance is the structural beam of all consistency models.

Developmental approaches. A great deal of empirical research using adults as S_s has been conducted in the area of cognitive balance. The aims of the present study do not require a detailed review of this research. Although there has as yet been comparatively little developmental research done in this area it is crucial to examine how social

cognition develops in children. The issue is important in at least two ways. First, to extend theoretical knowledge not only in the area of social cognition but the general area of child development as well. Second, the issue can have important practical implications for parents, educators and those working in the area of mental health.

Because the chief element in the existing theories is imbalance, the present study is based on the assumption that developmental research should be conducted to determine whether children are sensitive to or aware of imbalance. Theoretically oriented research concerning the broader problem of social cognition in children is still quite new. However, a brief review will indicate the context within which the present study must be understood.

Gollin (1958) had adolescents write judgments of a boy depicted in a five-scene silent movie. The observer's statements reflected both fairly accurate perceptions of and inferences about the boy's behavior. Gollin did find, however, that the stimulus qualities of the person being judged were sometimes modified.

Yarrow and Campbell (1963) employed an interview methodology to study person perception in children aged 8 through 13. The children put emphasis on interaction and the use of evaluative appraisals. It was also found that older children tended to give more complex perceptual reports.

Whiteman (1967) studied children's conceptions of psychological causality in 5-9 year olds. Story situations involving the motivations of a child were told to the children. Whiteman found that the younger children related the story in overt behavioral terms while the older children centered on more covert intent when relating the child's behavior.

Fritzler (1967), following the work of Heider (Heider and Simmel, 1944; Heider, 1967) required different aged children (age 6-12) to respond to a set of four standard cartoons (artificial social objects) showing quantity changes in a study of person perception. Fritzler found evidence of developmental levels in person perception. Younger children tended to give more statements of affect and very few statements of intention when asked to tell a story about the cartoons. The older children depended less on the perceptual qualities of the artificial social objects and more on the structural relationships of intention.

In a review of the literature on social perception in children, Dubin and Dubin (1965) concluded that social perception is age related, that older children perceive with more objectivity the characteristics of persons. They also contend that new techniques are needed to measure social perception in young children where reading and writing skills are limited.

In brief, the research reviewed above would indicate that children are able to make judgments concerning social perceptions. Furthermore, most of the research also shows a developmental pattern to social cognition: younger children are less complex, are more concerned with physical appearances and give fewer inference statements, while older children respond in a more adult fashion.

Viewed from the standpoint of general cognitive theory, the contribution of the earlier research is to clear the way for more analytical studies based on a more rigorous theory of social cognition. Since balance theory concerns a fundamental cognitive premise i.e., that people strive to maintain cognitive consistency, a rigorous investigation of the

balance principle in the social cognition of children now seems appropriate. The present research is thus especially designed is thus especially designed to probe the issue of imbalance because this issue is critical for existing theories of adult social cognition. However, as Dubin and Dubin (1965) suggest, effective research in this area depends upon proper methodology. The following section describes preliminary studies leading to the development of a new method for working with children.

Pilot Research.

    Theoretical feasibility. In order to carry out an investigation of sensitivity to imbalance in young children it was first of all necessary to find appropriate means to present children with meaningful social relationships containing imbalance. In this connection, preliminary studies were carried out with young children given stories concerning two hypothetical characters. It was soon found that even preschool children could indeed understand stories involving imbalance between hypothetical characters, and between such characters and himself. Thus, for example, in preliminary stories characters were described to children in which they were able to state preferences and simple solutions to hypothetical problems involving these characters.

    Technical feasibility. While it was being established that appropriate material could be understood by young children it also became apparent that the method of presentation could be standardized. Tape recordings of the stories were made for purposes of convenience and standardization.

    As the work proceeded it became clear that the children not only enjoyed the stories, but that they were also quite fascinated with the tape recorder itself. They would examine it thoroughly outside and then

want to look inside to see the people who were talking. Many times, they would talk back to the character voices. Since the children obviously enjoyed talking to the characters, the stimulus material was modified to promote an actual interaction not only between the characters but also between them and the child. At this point, a second recorder was added to preserve children's responses. In sum, the preliminary work showed that a 2-recorder system could be employed to both present stimulus material and maintain a record of responses.

Content. The technical problems being solved there still remained the question of content. What sort of social material can be employed to generate a meaningful imbalance for a child? The pilot data revealed that children were making most of their responses of preference and simple solutions in terms of affect toward the characters: "I would rather play with 'Captain Billy' because I like him and he likes me." Children also made responses in the course of pilot testing that suggested a concern with "power." Some of the characters were perceived as being of different sizes, and stronger or weaker than the other. In order to further investigate this finding and bring it under experimental control, several small toys were shown to children and described as belonging to one of the characters. The character owning the toys controlled their use; hence he was, operationally, a more powerful figure. The classical definition of power given by Cartwright and Zander (1960) is the maximum force which A can induce on B minus the maximum resisting force which B counter exerts. However, in the context of the present research, power is operationally defined as "the possession of desirable attributes or objects."

In sum, it was decided, on the basis of the pilot research, to manipulate both affect and power in order to create imbalance. The final stimulus tapes, therefore, were constructed to convey the imbalance described by Heider in ways that pilot work indicated would be meaningful to young children.

Specific Aims.

The research was finally designed as an exploratory study centering on two specific issues or questions. First, can preschool children (4-5) be employed as $\underline{S}_s$ in a rigorous experimental study of sensitivity to imbalance? The answer to this question not only depends upon their ability to understand the stimulus material but also involves the development of procedures and methods that can be used to analyze apparently arbitrary responses.

Secondly, the research concerns the basis on which children respond. If they do indicate sensitivity to imbalance, what factors can be seen as explaining their sensitivity?

Chapter II

Method and Design

The general purpose of this study, to examine the sensitivity of young children to imbalance in small scale social systems, was accomplished by means of a novel social judgment task that was administered to preschool children.

Stimulus Material.

The stimulus material consisted of taped stories which construct social relationships between two cartoon character voices and the child S. Three stories were used. All of them involved establishment of affective relationships. That is, the characters either liked or disliked each other, and/or the child S. In essence, all stories followed the same sequence: (1) the first character ("A") introduces himself and establishes an affective relationship between himself and the child; (2) character B comes on, introduces himself and inquires about the relationship between "A" and the child; (3) character A and B, talking to each other and to the child, structure the affective relationships between themselves; (4) character A establishes himself as being more powerful than "B" by informing the child that he will allow the child to play with his toys (which were visible to the child) if character B will leave; (5) character B refuses to leave. (See Appendix A for a complete transcript of the stories.) In summary, the purpose of the tapes is to construct a situation in which the child can be faced with a cognitive dilemma concerning the affective and power relationships between himself and two others.

For theoretical purposes, each of the three story situations is presented schematically in Figure 1. In situation #1 both characters have a
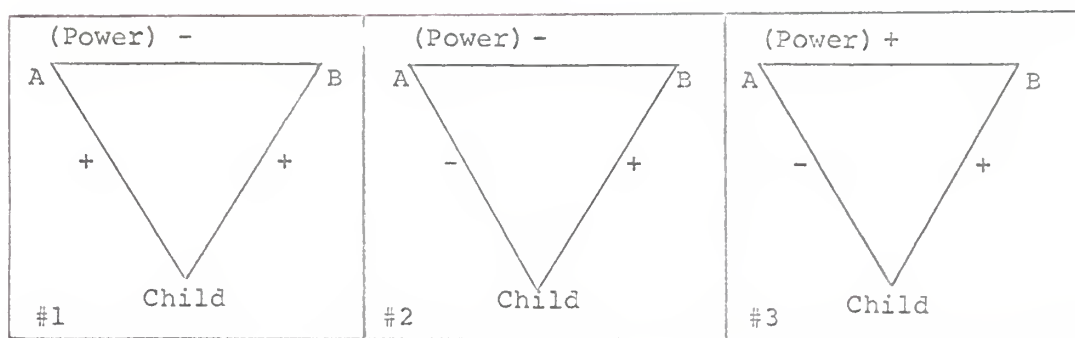
Fig. 1. Schematic drawings of the story situations.

     The sides of the triangles denote the bonds
between each of the cognitive elements (re: Heider,
1958) and the plus and minus signs denote the affect
toward each of the elements. It is assumed that the
affect applies in either direction along the sides of
the triangles.

positive affective bond with the child while sharing a negative affective bond between themselves. Situation #2 shows character A with negative affective bonds with the child and with character B. There exists a positive bond between character B and the child. Situation #3 depicts character B with positive affective bonds to both character A and the child. Character A and the child are linked with a negative bond.

It should be clear that these 3 story situations constitute the major manipulation (independent variable) in the study. As will be made clear below, depending upon how children responded to the stories (dependent variable), it could be determined whether or not they were sensitive to imbalance.

Task and Procedure.

Six male and seven female nursery-school children (age range 3 yr. 7 mo. - 5 yr. 2 mo; $\overline{X}$ = 4 yr. 5 mo.) were used as $\underline{S}_s$. All children were from middle-class families but of varied racial background. Each $\underline{S}$ was tested individually with the instructions that he would meet some people who live in the box (tape recorder), that they would probably talk to him and that he could talk back to them. After presenting the stimulus tape, $\underline{E}$ briefly reconstructed the story situation and asked $\underline{S}$ to solve the dilemma between himself and the characters. This dilemma is based on the fact that the child cannot play with the toys unless one character leaves, but this character refuses to leave. The $\underline{S}$ was asked what the two characters should do about the dilemma. If this didn't elicit a response, $\underline{S}$ was asked what $\underline{he}$ would do.

The subject was then asked to indicate which of two paper cut-out figures (identical except for size) was character A and which was

Character B. Following this, $\underline{S}$ was asked (1) which do you like best?
Why? (2) Which would you rather play with next time? Why? (3) How do
"A" and "B" feel about each other? Why do you think this is so? In
brief, the procedure involved: (A) General instructions: (B) Taped
story: (C) $\underline{S}$ reports solution of dilemma: (D) $\underline{S}'_s$ indications of
character preferences.

Design.

Since the stimulus tapes are of short duration (approximately 3
minutes) all three tapes were presented to each $\underline{S}$ in one experimental
session. Order effects were controlled for by counter-balancing order of
presentation across $\underline{S}_s$. This repeated-measures design allows the exami-
nation of solutions to each social situation over each $\underline{S}$ thus affording
a check on consistency of solution for each individual $\underline{S}$.

Hypotheses.

As stated earlier Heider's theory of cognitive balance predicts that
adults perceive and resolve conflict in imbalanced social situations.
Since no previous research testing this notion with young children has
been carried out, the major hypothesis of the present work is that pre-
school children also have this cognitive ability.

It was predicted that if children are sensitive to imbalance:

(1) their responses would be of the nature to bring about consistency
in the imbalanced situations.

(2) their responses would tend to produce the least change in the
perceptual-cognitive field.

Chapter III

Results

The separate analyses presented in this section are designed to examine several different questions relevant to the global question of whether or not young children are sensitive to imbalance. These analyses concern: (1) Identification of cut-out figures, (2) Balancing responses, (3) Non-balancing responses, (4) Preference responses, and (5) Dilemma responses.

Identification of Cut-outs.

Immediately after S_s heard the stimulus tapes, they were shown two paper cut-outs, exactly the same (except for size), and told that the cut-outs were the characters from the story situation. The S_s were asked to indicate which cut-out corresponded to each character. In 37 of the 39 cases, S_s identified the larger cut-out as the character that was operationally defined as more powerful, by virtue of his possession of the toys. Since it was expected that the children would associate power with size, this result tends to confirm our operational definition of power.

Balancing Responses.

If children are sensitive, it was expected that they would suggest some action that would bring about a balanced state. To examine this proposition, S_s' responses were shown to three independent judges who categorized them as to whether or not they were balancing responses. Any response that could be interpreted as changing valences of the connecting bonds resulting in a balanced condition was acceptable. Consider

for example, $\underline{S}'_s$ responses for situation #3: "Make Captain Frankie leave. I like Captain Charlie and want to play with him. Captain Frankie and Captain Charlie are not friends." The judges categorized this situation as being balanced because $\underline{S}$ liked one character and together, they disliked the second character. Another example judged to be balanced comes from $\underline{S}'_s$ responses to situation #1: "I like both Captain Billy and Captain Jimmy. They are good friends and like me." This situation is balanced because there exists positive affective bonds between all three parties involved. The average intercorrelation between the three judges' categorizing responses was .90 (d.f. = 38, p < .001), indicating a high degree of inter-judge reliability. The results of the balancing responses analysis are shown in Table 1. Twenty-eight of 39 instances were judged as balanced (binomial probability < .01), demonstrating that children respond to the stimulus situations in such a manner as to bring about consistency in their immediate perceptual-cognitive environment.

The second prediction concerned the manner in which children would impose consistency on the imbalanced stimulus situations. According to balance theory, $\underline{S}_s$ attempt to achieve balance in ways which least change the perceptual-cognitive field. In this connection, $\underline{S}_s'$ responses to the two imbalanced stimulus situations (#1 and #3) were examined. Of the 20 instances of balancing responses for these two situations, 18 involved changing the valence of only one affective bond.

Non-balancing Responses.

Further analysis of the balance data was made in order to examine the 11 cases in which $\underline{S}_s$ did not balance the stimulus situations. Note that the results given in Table 1 include $\underline{S}_s'$ responses to all three of the

TABLE 1

Analysis of balancing versus non-balancing
responses over all three stimulus situations.

	Stimulus 1	Stimulus 2	Stimulus 3	Totals
Balancing Responses	10	8	10	28
Non-Balancing Responses	3	5	3	11
N = 39	Binomial probability < .01			

stimulus situations. However, it will be remembered that situation #2 was balanced with respect to affect. Of the 11 non-balancing responses, 5 were given for situation #2. Thus the largest number of non-balancing responses were made to the already balanced stimulus situation. The remaining 6 cases of non-balancing responses were distributed equally over the other two stimulus situations. The 3 cases of non-balancing responses for situation #1 were due to $\underline{S}_s$ who apparently ignored, or were never aware of the imbalance in the story. The 3 non-balancing responses for situation #3 were random and involved changing the valence of more than one affective bond. (A schematic presentation of all $\underline{S}_s$' responses is shown in Appendix B).

Preference Responses.

Because $\underline{S}'_s$ decisions as to which character he preferred to play with and/or like, clearly influence all his responses, these decisions were examined in detail. Table 2 compares the preference responses (like and play) for the more powerful and the less powerful character. The analysis over all three story situations demonstrates that young children significantly preferred the more powerful character (binomial probability < .02). The majority of the balancing responses were in line with this finding, viz., the less powerful character was rejected by $\underline{S}$ and was perceived as not being liked by the more powerful character.

However, this result does not take into account the specific relationship between power and affect in each stimulus situation. That is, the general power preference indicated in Table 2 is inflated by the fact that in situation #1 the more powerful character also shows positive affect. Further analysis was therefore done on situations #1 and #3 in which power

TABLE 2

Children's preferences for either more powerful
character or less powerful character over all
three stimulus situations.

	Like	Play	Like/Play
Power	26	24	50
No Power	13	15	23
N = 78	Binomial probability <. .02		

is pitted directly against affect: i.e., the more powerful character
shares a negative affective bond with $\underline{S}$, and the less powerful character
shares a positive affective bond with $\underline{S}$. From the total of 52 preference
responses, 31 were given for the more powerful character. The analysis in
Table 3 shows no significant preference for either power or affect when
they are thus placed in direct opposition.

Dilemma Responses.

In addition to the analyses directed toward the hypotheses stated
earlier, $\underline{S}_s$' solutions to the choice dilemma (the question concerning what
the characters should do) were also examined. The solutions were put into
one of three categories: (a) rejection, (b) sharing, and (c) no-solution.
An example of a solution falling into the rejection category was: "Let's
talk Captain Jan into leaving." Other instances of rejection concerned
the two characters fighting, with the preferred character emerging the
victor. "Make Captain Billy let us all play with the toys, because we're
all friends" is a typical solution that fell into the sharing category.
When $\underline{S}$ did not answer, or made a non-solving response, this was put into
the no-solution category. There were 26 instances of rejection (most
involving the less powerful character), 8 cases of sharing, and 5 cases
of no-solution.

Together, the above data indicates that preschool age children under-
stood the stories and the built-in dilemma. The data further indicates
that they were sensitive to the imbalance in the stimulus situations and
were able to change them in order to bring about consistency.

TABLE 3

Children's preference responses
when power is in direct opposition
with affect (situations #2 & #3).

	Like	Play	Like/Play Comb.
Power Neg. Aff.	17	14	31
No Power Pos. Aff.	9	12	21
N = 52	Binomial probability		N. S.

Chapter IV

Discussion and Summary

General Findings.

The general findings of this study support the notion that young

children respond to imbalance in a manner much like adults. Moreover,

the results of the present study are in line with the general findings of

developmental studies conducted within the last ten years. Because of new

and better techniques for working with children, these studies have shown

that young children have greater abilities than had been previously

thought. In the area of perception, for example, Bower (1967) utilized

the sucking response in an operant conditioning procedure to demonstrate

a high degree of perceptual organization in infants just 36 days of age.

In programatic studies by Moore (1964), it has been shown that young

children can acquire reading and writing skills even as early as age 3 1/2

or 4. The present research, also employing a new methodology, shows that

in the area of social cognition, young children's abilities also go beyond

expectations.

Specific Findings.

Sensitivity to imbalance. The results concerning children's sensi-

tivity to imbalance, per se, must be qualified by the fact that the

children were not only presented with imbalanced stimulus situations, but

they were also made aware of the imbalance when confronted with the dilemma

questions. Their responses to this "forced" imbalance were very real,

however, and followed the pattern that balance theory suggests. This does

not imply that the children were not, in fact, able to perceive the

imbalance in the stimulus stories by themselves. But it is not possible

to answer this question in the present study. The dilemma question procedure was used here in order to compensate for any arbitrary distortion due to the children's limited memory span. The need for future research in cognitive development using less directive procedures to convey theoretical imbalance is indicated.

Non-balancing responses. As was shown in the results section, most of the non-balancing responses were given for stimulus situation #2 which was, at the outset, theoretically balanced. The typical non-balancing response for this situation followed from the child ignoring the immediate dilemma. For example, one child simply responded to the dilemma question as follows: "I like Captain Jan because he likes me. But I also like Captain Max because he has toys. They are not friends." Thus in the course of responding in terms of his preferences, S constructed a theoretically imbalanced state because he likes the two characters who dislike each other. The data here, although not substantial, indicate that power (possession of toys) has the effect of changing a negative affective bond into a positive affective bond. Because this is such an intrinsically interesting point, further study was done by examining every instance in which the initial affective bond between the powerful character and the child was negative. In the 26 such cases, S_s changed the negative bond to a positive bond 19 times. Chi square analysis ($x^2 = 5.52$, d.f. = 1, p < .02) indicates that these data are not due to chance responding. If power does have this effect then these data bear directly on the preference responses.

Preference responses. While the major purpose of the present study concerned balancing responses, children's preferences were examined in

detail because much of the technical literature as well as everyday experience, indicates that the general behavior of young children is heavily influenced by their immediate, emotional likes and dislikes. When the preference responses over all situations were analyzed, a significant preference for the more powerful character was found. However, since the effects of power and the effects of affect were combined in this analysis no meaningful statement could be made concerning the true preferences of the children. Therefore, a second analysis was made in which power and affect were in direct opposition. The results of this analysis indicated that power and affect were equally preferred.

Results here lead to an especially interesting theoretical issue; namely, the degree to which power and affect are highly interrelated in the everyday lives of most young children. The preschool child typically knows few power figures and in most cases they are his parents, who share positive affective bonds with him. Separating the two variables appears to be impossible until the child is confronted with power figures with whom he shares no affective bonds. Developmental studies determining the relationship between power and affect are required.

The implications of this issue seem very clear for pedagogy and psychopathology. Children identify with power figures and prefer to like them (Johnson, 1963; Mussen and Distler, 1959; Mussen and Rutherford, 1963). Since power and affect seem to be inextricably tied variables for young children, the absence of one of these variables could have a deleterious effect. Take, for example, the classroom situation for a black child. He would want to identify with and have positive feelings toward the teacher (power figure). The possibility exists that he would experience

emotional rejection by the power figure and thus be faced with a condition of neurotic conflict, that is; (a) novel, because power and affect have been positively correlated in his past, (b) threatening, because power, unmitigated by positive affect must provoke anxiety, and (c) antithetical to learning, because energy that might otherwise be available for constructive behavior will have to be used for defensive behavior. This theoretical issue again points out the urgency for developmental research in this area.

In sum, this research, with the qualifications noted above, indicates that the area of social cognition in young children be examined with meaningful results. The value of the present exploratory study seems to lie in three areas:

(1) The new methodological techniques employed.

(2) The findings of children's sensitivity to imbalance.

(3) The heuristic value stemming from the issue of power versus affect in children's preference responses.

APPENDIX A

TAPE #1

Experimenter introductory remarks:
Today we're going to play a fun game and meet some people who live in
this box (pointing to the tape recorder). They will probably talk to you---
you can talk back to them.

Billy: Hello, my name is Captain Billy. What is your name?

   That's a nice name, how old are you? Do you go to school?

   Well, look who's coming--it's Captain Jimmy.

Jimmy: Hello, my name is Captain Jimmy. What is your name?

   What have you two been doing? (Pause for child's response)

Billy: We've been talking because we are friends. I like my new friend

   and my friend likes me.

Jimmy: But your friend is my friend too--and we like each other just

   as much.

Billy: Well!! Captain Jimmy, I don't like you at all.

Jimmy: That's alright 'cause I don't like you either, Captain Billy.

Billy: My friend and I are going to play with my toys----

   you don't get to play Captain Jimmy. You just better leave

   or I won't bring out my toys.

Jimmy: I'm not going to leave, I'm going to stay here with my friend.

Billy: Listen Captain Jimmy, if you don't leave us alone I'm not

   going to bring out my toys.

    E appeals to child to come up with a solution to break the
     deadlock between the characters.

Standard questions:

  Which do you like best?   Why?
  Which would you rather play with next time?   Why?
  How does Capt. Billy and Capt. Jimmy feel about each other?
  Why do you think that?

TAPE #2

Experimenter introductory remarks:
Today we're going to play a fun game and meet some people who live in
this box (pointing to the tape recorder). They will probably talk to you--
you can talk back to them.

Max: Hello Kid, my name is Captain Max. What's your name?

Do you go to school?

Well, look who's coming--if it ain't ole Captain Jan.

Jan: Hi! My name is Captain Jan. What is your name?

That's a nice name. How old are you? What have you two

been doing? (Pause for child's response).

Max: We ain't been doin' nothing 'cause we're not friends--just talking.

Jan: Well, I think we can be friends--do you think we can be friends?

(E asks child if he thinks Capt. Jan and he can be friends).

Max: You two can be friends if you want to 'cause I don't like either

one of you.

Jan: That's alright because I don't like you either, Captain Max.

Max: Hey Kid, if Captain Jan leaves us alone I'll let you play with my toys.

Jan: I'm not leaving. I'm going to stay here with my friend.

Max: Listen Captain Jan, if you don't leave us alone I'm not going

to bring out my toys. (Pause for response).

E talks to child: "Captain Max wants you and he to play with his
toys. But he won't bring his toys out unless Captain Jan leaves.
And Captain Jan doesn't want to leave because he likes you."

What do you think they should do?
What do you think you should do?

Standard questions:
Which do you like best? Why?
Which would you rather play with next time? Why?
How does Capt. Max and Capt. Jan feel about each other?
Why do you think that?

TAPE #3

Experimenter introductory remarks:
Today we're going to play a fun game and meet some people who live
in this box (pointing to the tape recorder). They will probably
talk to you--you can talk back to them.

Charlie: Hello, my name is Captain Charlie. What's your name?

How old are you? Do you go to school?

Hey, here comes my friend, Captain Frankie.

Frankie: Hi there, my name is Captain Frankie. What is your name?

That's a nice name. Do you have any pets? (Pause)

Would you like to be my friend? I like you.

Charlie: But Captain Frankie, you are my friend. You can't be friends

with both of us because I don't like anybody but you.

Frankie: Yes Captain Charlie, you and I are friends, but I also like

my new friend even if you don't.

Charlie: I'll let your friend play with my toys if you will leave

us alone Captain Frankie.

Frankie: I don't want to leave my new friend!

Charlie: If you don't leave us alone Captain Frankie, I won't bring

my toys out.

   E talks to child: "Captain Charlie will let you play with his
toys if Captain Frankie leaves. But Captain Frankie doesn't
want to go away because he likes both of you.

   What do you think they should do?
   What do you think you should do?

Standard questions:
     Which do you like best? Why?
     Which would you rather play with next time? Why?
     How does Capt. Charlie and Capt. Frankie feel about each other?
     Why do you think that?

APPENDIX B

S	Situation 1 child $+\triangle+$ $x* - y$	Situation 2 child $-\triangle+$ $x* - y$	Situation 3 child $-\triangle+$ $x* \div y$
1	$+\triangle- $ B $-$	$+\triangle-$ B $-$	$+\triangle-$ B $-$
2	$+\triangle+$ B $+$	$+\triangle-$ B $-$	$-\triangle\div$ B $-$
3	$+\triangle-$ B $-$	$+\triangle-$ B $-$	$+\triangle\div$ B $\div$
4	$-\triangle+$ B $-$	$+\triangle-$ B $-$	$-\triangle\div$ B
5	$\div\triangle\div$ I	$\div\triangle-$ B $-$	$\div\triangle\div$ B $\div$
6	$\div\triangle-$ B $-$	$+\triangle-$ B $-$	$-\triangle\div$ B $\div$
7	$+\triangle-$ B $-$	$+\triangle-$ I $\div$	$-\triangle\div$ B
8	$+\triangle-$ B $-$	$-\triangle+$ B	$+\triangle-$ I $\div$
9	$+\triangle-$ B $-$	$-\triangle+$ I $\div$	$\div\triangle-$ B $-$
10	$+\triangle-$ B $-$	$+\triangle+$ I $-$	$\div\triangle\div$ B $\div$
11	$+\triangle+$ I	$+\triangle\div$ I $-$	$\div\triangle+$ B $\div$
12	$+\triangle-$ B $-$	$\div\triangle\div$ I $-$	$\div\triangle-$ I $\div$
13	$+\triangle+$ I	$-\triangle\div$ B	$\div\triangle\div$ I $-$

* power

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SOCIAL COGNITION IN PRESCHOOL CHILDREN:
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by

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AN ABSTRACT OF A MASTER'S THESIS

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Utilizing a new methodological technique developed for the study of social cognition in young children, this study represents an extension of the research in person perception and balance theory. Following Heider, it was predicted that if children were sensitive to imbalance, they would respond to imbalance in small scale social systems in a manner much like adults. Furthermore, their responses would be such that only minimal changes would be imposed on their perceptual-cognitive field.

Thirteen nursery-school children were tested individually on three recorded stories concerning the hypothetical state of balance involving two cartoon-like character voices and the child. The story situations were designed to create a dilemma for the child. After hearing each of the story situations, the subject was asked; (1) what the characters should do about the dilemma, (2) which character he liked better, (3) which character he preferred to play with, and (4) how the characters felt about each other. In addition to these responses, the subject was to indicate which of two paper cut-out figures represented each character.

Analyses of these response measures indicated that preschool aged children were sensitive to imbalance in the small scale social systems and were able to restructure them in order to bring about consistency.

The use of tape recorded stories designed to permit interaction between the subject and the characters is an effective device for the study of social cognition in young children. Implications for future research to determine the relationship between power and affect were made.