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SCHULTZ, Ned William, 1951-
A COGNITIVE-DEVELOPMENTAL STUDY
OF THE GRANDCHILD-GRANDPARENT BOND.

The Ohio State University, Ph.D., 1976
Psychology, social

Xerox University Microfilms, Ann Arbor, Michigan 48106
A COGNITIVE-DEVELOPMENTAL STUDY

OF THE

GRANDCHILD-GRANDPARENT BOND

A DISSERTATION

Presented in Partial Fulfillment of the Requirements for

the Degree Doctor of Philosophy in the Graduate

School of The Ohio State University

By

Ned William Schultz, B.S., M.A.

* * * * *

The Ohio State University

1976

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ACKNOWLEDGMENTS

A number of individuals connected with several preschools, a baseball team and The Ohio State Fair aided this study. I extend my thanks to all who helped.

I thank Professor Charles Wenar whose ideas and questions helped shape the dissertation. I thank Professor Henry Angelino for his encouragement and interest in me as a graduate student. I especially thank Professor George G. Thompson for the influence he had on this dissertation, and for his effect on me as a graduate student and a person.

J.M.K. and W.D.M. made this possible through their unique contribution.

But Teresa made sure it got done.
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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td>24</td>
</tr>
<tr>
<td>RESEARCH FINDINGS</td>
<td>33</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>55</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>69</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>71</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>73</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>75</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>76</td>
</tr>
<tr>
<td>APPENDIX E</td>
<td>78</td>
</tr>
<tr>
<td>APPENDIX F</td>
<td>82</td>
</tr>
<tr>
<td>APPENDIX G</td>
<td>84</td>
</tr>
<tr>
<td>APPENDIX H</td>
<td>85</td>
</tr>
<tr>
<td>APPENDIX I</td>
<td>88</td>
</tr>
</tbody>
</table>
Richards (1974) has noted that the developmental psychologist who is concerned with studying human socialization must focus attention on the skills necessary for the child to become "a competent member of his social community". These skills are those which "emerge slowly as the child develops and apparently grow out of the relationship he forms with the adults around him" (1974, p. 1). This emphasis on the importance of early child-adult relationships and interactions has led developmental psychologists to investigate the formation of social bonds. The majority of developmental studies that have attempted to study the formation of social bonds have centered on the attachment process during infancy.

From the literature on this attachment process two generalizations emerge which characterize the research in this field. The first is that attachment occurs very early in the lifespan. By the child's second year (and perhaps even earlier) the significant events seem to have taken place already. The second generalization is that attachment inevitably involves another person in a caretaker role. The literature does not indicate that either of these statements is unequivocally true. Both, however, seem to be a priori
assumptions which have guided many researchers who have studied the attachment process.

An impressive amount of data has been generated in the testing and refining of these hypotheses. But by treating these statements as assumptions, psychologists have not investigated certain avenues of research thoroughly, and have neglected others. For instance, what of attachments or bonds that are formed in later childhood, in adolescence or in adulthood? The major theoreticians and researchers have not dealt with attachments which may occur later in life, except to claim their similarity to early attachments. Bowlby (1969) states flatly that "attachment behaviour in adult life is a straightforward continuation of attachment behaviour in childhood", and he offers only a very general explanation of this, saying:

Finally in old age, when attachment behaviour can no longer be directed towards members of an older generation, or even the same generation, it may come instead to be directed towards members of a younger one (1969, p. 207).

Rutter (1972) agrees, claiming that attachments to others after the initial maternal attachment do not "differ in kind". The only difference he notes is in the strength of attachment. There is a lack of general support in the literature for statements as broad as these. It is apparent that investigating only those attachments which occur in
infancy has blocked a complete understanding of processes which may be significant later in the lifespan.

Likewise, social bonds involving persons other than caretakers have not been investigated carefully. Bonds are formed between children and their peers, even in the absence of adult caretakers as Freud and Dann (1951) documented. Adolescents experiment with attachments until they find an acceptable "love" attachment. Adults also form social bonds which may differ considerably from the infant-caretaker bonds which psychologists have concentrated on.

The first aim of this investigation relates to these two problems in psychologists' study of human social bonds. The present study is designed to explore the formation of a social bond which may occur beyond the infancy period and involve persons who may not be primary caretakers. This is the social bond between grandparents and grandchildren. Psychologists have not systematically studied grandparents or their role in child development. What work has been done is speculative in nature (e.g., Kalish, 1967) or sociological in its orientation (e.g., Neugarten and Weinstein, 1964), although a notable exception exists (Kahana and Kahana, 1970). The grandparent-grandchild bond may be a strong social bond which merits attention.
The second major aim of the present study is to take a cognitive-developmental approach to the study of the processes which may be involved in the formation of social bonds. The affective and social aspects of attachment have been acknowledged by psychologists. With the resurgence of interest in the work of Piaget, however, an attempt to integrate the cognitive aspects of development with the affective and social aspects might be more appropriate. One approach to attachment formation that has attempted a cognitive-affective-social integration is Kohlberg's theory (1969). This theory is based on the individual's gradually developing awareness of roles and his or her reciprocal role interactions with others. Thus it seems especially well-suited for the investigation of the development of the grandparent-grandchild bond. Kohlberg has not elaborated extensively on his position, and hence his theory only provides a general structure. It is a structure, however, which may be used to interpret some important research findings on cognitive aspects of social interactions.

These two aims, the study of a neglected area of social bond formation and the testing of a theory which attempts to integrate the cognitive, affective, and social facets of attachment, are the purpose of the present study. Before proceeding, however, critical
problems of definition need to be considered, and the relevant research on cognitive, affective, and social aspects of human interactions needs to be examined.
A major difficulty in the investigation of the "attachment" process between a grandparent and a grandchild is that there is a strong argument that this bond may not be an attachment at all. To understand this argument and the problems of definition which result, the historical uses of the word attachment must be examined. Psychoanalytic theory, and its founder, Freud, are chiefly responsible for the early use of the term attachment in the field of psychology. As Maccoby and Masters (1970) note, an explanation based on instincts is at the center of the psychoanalytic description of attachment. Freud postulated that sexual instincts motivate the infant toward objects in the environment. As a result, he or she forms the object choice or object relation. Due to the infant's behavioral repertoire, this motivation is expressed in oral activity, especially sucking. Sucking provides erotic pleasure to the infant, who in turn attempts to draw the object choice close, or attract it. As the mother is generally associated with the sucking and feeding, she becomes the object choice. Wenar (1971) has described the process:

In the context of being fed by the mother (the infant) forms his first emotional
attachment...Instead of being exclusively bound to bodily sensations, he derives pleasure from being with the mother and from the mental image of the mother he evolves from repeated contact (1971, p. 235).

The strong feelings of affection and love that may result from this process define attachment in the psychoanalytic view. Freud generalized the process to include instances in later childhood and adulthood when object choices were made. He held, however, that the object would be chosen on its similarity to a nurturant person from the early life of the individual (Maccoby and Masters, 1970). The later attachments, as with the early attachment, would be based on the investment of instinctual energies in an object relation.

A second influential explanation of attachment that is also based on instincts is the ethological view of attachment. In Freud's system, the sexual instincts dominated the self-preservation instincts during the course of attachment formation. The field of ethology has focused almost entirely on self-preservation and evolution as explanations for attachment behavior.

The strict ethological position (perhaps best illustrated by the animal studies of Lorenz and others) represents a change from viewing proximity-seeking behavior by the infant as a way of achieving pleasure and erotic delight to viewing proximity-seeking behavior as a means of self-preservation. In the study of human attachment,
developmental psychologists have provided strong support for a combined view of attachment. The work of Bowlby (1969), which is rooted in psychoanalytic theory and which has been shaped significantly by ethology, seems to be the most popular view of attachment in developmental psychology at present.

The basic premise of the ethological position as stated by Bowlby is that the infant is helpless on his or her own, and as such, is dependent on the adult for survival. Evolution has shaped a system of instinctive signalling behaviors which elicit stereotypic responses. The infant cries or smiles, and the caretaker responds. The caretaker's signals, such as the voice or facial configuration, elicit instinctive behavior, such as the infant's smile. This reciprocal system, which is based on feedback, ensures that close proximity between infant and caretaker will be maintained. In Bowlby's view, the process enhances the survival rate of the helpless newborn child. Bowlby's and others' elaborations on the core of this theory have stimulated an impressive amount of research. The work of Ainsworth, for example, has been aimed at discovering and verifying the varieties of proximity-seeking behaviors and the conditions under which they occur. Even this work, however, has retained the essence of the psychoanalytic approach: the view
that attachment is love and affection. Ainsworth has stated that "attachment implies affect". She has defined attachment as "an affectional tie that one person forms to another specific person, binding them together in space and enduring over time" (1973, p. 1). In summary, the most widely accepted theory of attachment at present seems to view attachment behavior as having two distinct and significant components: the phenotypic proximity-seeking behavior and the genotypic affection and feelings of love.

Each of these theories (the psychoanalytic, ethological, or Bowlby's melding of the two) places conditions on describing the bond between grandchildren and grandparents as an attachment. In the Freudian view, the bond would be an attachment only if the grandparent was cathected with the instinctual energy, due presumably, to a resemblance of the grandparent to the grandchild's parents. In the ethological view, an investigator would have to demonstrate the proximity-seeking behaviors of the grandchild and grandparent, and attempt to discover the instinctive signalling and eliciting system. The psychoanalytic and/or the ethological meanings of attachment may be difficult or impossible to use because of this, and thus the argument that the grandchild-grandparent bond is not an attachment seems to gain support. There are weaknesses in both the psychoanalytic and ethological approaches, however, which may indicate that an alternative approach to attachment
might be more appropriate. The first difficulty (as mentioned previously) is that the study of attachment behavior has been confined for the most part to attachments which form during infancy. The psychoanalytic and ethological theories do not deal in sufficient detail with attachments which may occur later in life. Each offers only one explanation: that later attachments are formed in an identical way to early ones. The literature does not show sufficient evidence to support this presumption.

A second major difficulty is that the two theories deal only with bonds between individuals and caretakers. This restriction may eliminate any strong emotional bond involving individuals when a caretaker role has not been assumed. This may be a serious weakness of the two approaches when the grandchild-grandparent bond is considered. Grandparents and grandchildren may form very strong affectionate bonds, yet most grandparents do not take a caretaker role. Neugarten and Weinstein (1964) report that less than 10 per cent of grandparents said that they were in a parent surrogate or caretaker role. Among those who claimed that they were caretakers, none were males; only grandmothers said they took this role. Therefore the psychoanalytic and ethological conceptions of attachment may not be sufficient to explain many grandchild-grandparent bonds.
A final problem in using psychoanalytic or ethological theory to investigate and explain the relationship between grandparents and grandchildren has been voiced by Harre (1974). In a review of social development, Harre criticizes developmental psychologists for assuming that adult social bonds are emotional or affectionate bonds which have their basis in infancy. Of this assumption, he states:

Nothing could be further from the truth. The astonishing thing about the adult social world...is that it forms and transforms itself with little reference to emotional bonds; lasting or ephemeral (p. 246-247).

Harre also states:

It is, I think, a common assumption to suppose that emotional bonds cause social cohesion. A much more accurate response is to stand back in astonishment in the face of the maintenance...of forms of social cohesion in the actual situation of emotional flux (1974, p. 247).

To explain what may govern adult social interactions, Harre offers what he calls a principle, saying:

People seek, above all, to endow their social experiences with meaning (1974, p. 256).

Harre is implying that one needs to understand the social interactions in which he or she is involved. And to
the developmental psychologist, this implies that cognitive aspects of social interaction may be significantly involved in the formation of the grandchild-grandparent bond. One approach to defining attachment that places emphasis on the cognitive aspects of social interaction has been forwarded by Kohlberg (1969). Kohlberg states his basic definition and premise as follows:

A social attachment or bond is conceived of as a relationship of sharing, communication, or cooperation (or reciprocity) between selves recognizing each other as selves (1969, p. 349).

Kohlberg’s attachment process, as postulated, follows a definite sequence. The individual first recognizes himself or herself in specific roles. He or she then seeks social interactions which complement these roles. These role interactions or role transactions with others may become intense and complex. Emotional satisfaction may result as affective aspects of the person and his or her roles are transacted. In this manner, an attachment between two individuals is weaved, strengthened, and maintained.

It is this conception of attachment with which the present study is concerned. Because of the potential difficulties in attempting to apply either psychoanalytic or ethological theory to the study of attachments which
are formed later in life, Kohlberg's theory may be more appropriate. The present investigator feels that the theoretical position that Bowlby has established and the work that has resulted from it may be the most appropriate explanation of attachments which are formed during infancy. It is being argued, however, that attachment behaviors which occur later in life are qualitatively different, yet may still be attachment behaviors. A possible solution to this dilemma has been stated by Harre (1974). In describing the social behavior of children, Harre delineates the "autonomous" social world and the "precursor" social world. The precursor world consists of behaviors which may be significant during adulthood. Precursor behaviors train children by allowing practice in adult-like behaviors or in behaviors which may be analogous to adult behaviors. Autonomous behaviors, however, may not be directly related to later social development. According to Harre, they are independent of adult behaviors; they are neither similar nor analogous. Harre states that in time, these behaviors must be left behind by the child as he or she develops and matures. He notes:

-13-
It seems to me that Bowlby (1969) has made out an extraordinarily strong case for his "attachment" analysis of the child-mother social world, that develops form during the first year of life, flourishes as an autonomous culture until the end of the third year, and declines in importance thereafter (1974, p. 260-261).

Harre also states:

I want to make the radical proposal that the mode of world ordering ("attachment") which characterises the autonomous world, must perish before adulthood is possible... The social skills of the attachment world, emphasised by those who have pointed out the social power that very young children have over their mothers, must be abrogated, and a wholly different set of skills develop (1974, p. 261).

The present investigator feels that Kohlberg's (1969) theory of attachment may be a useful approach to investigating this new set of social skills to which Harre refers. With these definitions in mind, the cognitive-developmental approach, and Kohlberg's theory in particular, can be examined.

Kohlberg's theory (1969) on the development of social attachment has its roots in two areas of research and theory which have been viewed as significant by developmental psychologists. The first area is the research of Bandura and his associates on the processes of imitation and identification (Bandura and Huston, 1961; Bandura, 1962; Bandura, Ross and Ross, 1963);
Bandura and Walters, 1963; Bandura, 1974). Kohlberg has used these research findings to explain the motivation for the development of social attachment. He states:

(1) the formation of human social bonds or attachments requires components of past shared-identity (similarity) and of the disposition to share and learn new behavior patterns (imitation), and (2) therefore, the motivational determinants of attachment are in large part those discussed already as determinants of imitation (1969, p. 460).

As such, Kohlberg holds that this motivation is in reality competence motivation. Kohlberg notes:

The interest value of the activities of the other, his competence and social value, the relevance of his competence to the self’s own action, and the general degree of similarity or like-mindedness of the self and other are all major determinants of dependency or attachment (1969, p. 460).

Kohlberg argues that the same motivational drives that may cause a child to seek environmental stimulation or feedback about his or her activity are the drives that motivate social attachment. The major difference with social attachment, however, is that "social attachment is motivation for shared stimulation" (Kohlberg, 1969, p. 460). As a result, the important role interactions are reciprocal role interactions. In addition, an individual's motivation to form a social attachment to another implies to Kohlberg, the need for the other
to reciprocate and form an attachment to the individual.

The second area from which Kohlberg has borrowed to form his theory is Piaget's investigation of processes involved in cognitive development. Kohlberg emphasizes the development of cognitive structures 1) which cannot be explained as the result of associationistic experiences such as repetition or reinforcement; 2) which develop not through maturation or learning alone, but through interactions between the individual and the environment; and 3) which are always structures of action (to Piaget, "thought is internalized action"). Kohlberg also borrows Piaget's use of the concept of equilibrium. As Maccoby and Masters (1970) note, Kohlberg's theory is a cognitive balance theory in that it stresses the individual's need to move toward cognitive equilibrium in his or her social interactions with others. The formation of social attachments, while partially based on imitation and identification, is therefore dependent on the individual's level of cognitive development. Kohlberg states that "age-developmental progressions of attachment are generated by cognitive-structural changes" (1969, p. 464). The most impressive research evidence for this statement is in the work and writings of Schaffer and Emerson (1964) and Schaffer (1971). In the well-known Glasgow study,
Schaffer and Emerson studied the sequence of attachment formation in early infancy. The significance of observing the pattern of attachment formation has been the concomitant observation that the pattern parallels cognitive development. Schaffer (1971) argues that the cognitive level of the individual determines the type of attachment he or she may be able to form. For example, a specific attachment to the mother requires that the infant be able to recognize the mother and recall her in her absence. Schaffer states that the infant develops a mental "internalized mother", thereby making the infant's mother an object with permanence. This in turn provides the infant with security in the mother's absence. The specific attachment occurs at the time that it does as a result of the infant's inferred cognitive capabilities (Schaffer, 1971).

Kohlberg's unique contribution has been to combine these two major areas and study sex-role development (Kohlberg, 1966; Kohlberg and Zigler, 1967). It is this work upon which his theory of social attachment is based. Kohlberg holds that sex-role development and social attachment development are based on similar processes. He states;
Social cognition always involves role-taking, i.e., awareness that the other is in some way like the self and that the other knows or is responsive to the self in a system of complementary expectations (1969, p. 349).

The first step in the process is a self-labeling step in which the child categorizes himself or herself, or the roles that he or she acts out. Secondly, the child differentiates by inferred cognitive processes those objects, activities or persons which fit with his or her self-categorization versus those which do not. Kohlberg states that at this point the child begins to value interactions that are consistent with or complement his or her self-categorization. The final step occurs when the child has the inferred cognitive ability to make groupings based on judgments of similarity rather than on the basis of association. Social attachments to similar persons become possible when this step occurs, as the child now may see the similarities and share the role transactions.

Kohlberg's research (Kohlberg, 1966; Kohlberg and Zigler, 1967) seems to support this series of postulated steps. Kohlberg and Zigler (1967) found a "clear preference" for sex-typed behaviors and objects by age 3, preference for imitation of the same-sex figure by age 5, and a tendency to direct "social
dependency" toward a same-sex figure at age 6. The study, based on a sample of male children only, also indicated that advanced cognitive functioning was associated with more rapid progression through the postulated steps. But Kohlberg puts heavier emphasis on the importance of the hierarchical arrangement of the steps. He states:

Regardless of the boy's speed in moving through the sequence, however, he moved through it in the same order (1969, p. 458).

There is a lack of research in the literature on the formation of attachments by grandparents, or any other group of older individuals. Hence, an attempt to test Kohlberg's theory is largely exploratory. One important study that does serve as a starting point, however, was conducted by Kahana and Kahana (1970). These investigators studied children's perceptions of their grandparents. Kahana and Kahana found predictable developmental increases in the use of abstract descriptors of grandparents (as opposed to the use of more concrete descriptors) across three age groups (4- to 5-year olds, 8- to 9-year olds, 11- to 12-year olds). Frequency of contact with grandparents and the ranking of grandparents based on the child's preference were both treated as demographic variables, but no
experimental test of their relationship was made. Sex differences in grandparent preference were also not investigated. From surveying the children's reasons for particular preferences, Kahana and Kahana concluded:

It is possible that different styles of grandparenthood fit in best with the child's needs at different stages in his development (1970, p. 105).

Thus, it might be postulated that the quality of role interactions at various levels of cognitive development may be significant to the process which may result in a grandchild-grandparent social attachment (as Kohlberg's theory would predict).

As an investigation of the process of social attachment formation between grandchildren and grandparents, and as a test of Kohlberg's theory, the present study was an attempt to examine the following hypotheses:

1. Grandchildren will show greater role knowledge of a grandparent with whom they have many reciprocal role interactions than with a grandparent with whom they have fewer interactions. This follows from Kohlberg's view that interactions lead to role transactions and role sharing which may in turn lead to greater role knowledge of the other.

2. Grandchildren will exhibit greater "cognitive complexity" (Signell, 1966) in descriptions of a
grandparent with whom they have many reciprocal role interactions than with a grandparent with whom they have fewer interactions. Livesley and Bromley (1973) state that the research indicates that the complexity of perceptions of children and adolescents are influenced by the nature of the interactions with others. Kohlberg theorizes that attachment may develop through role sharing interactions. This may require a cognitive mediating process which is inferred. The hypothesis is that one measurable result of this inferred process may be increased cognitive complexity.

3. Grandchildren will attribute greater perspective taking ability to grandparents with whom they have many reciprocal role interactions than to those with whom they have fewer interactions. Perspective taking may involve cognitive abilities (e.g., non-egocentrism) and affective components (e.g., empathy). Kohlberg's theory stresses that affective and cognitive development may be parallel rather than separate. Social interactions, specifically reciprocal role sharing experiences, may provide occasions for this development. Kohlberg states:

The child's whole social life is based on "empathy", i.e., on the awareness of other selves with thoughts and feelings like the self (1969, p. 393-394).
4. Grandchildren will express more emotional, affective and instrumental dependence and will attribute stronger feelings of affection to grandparents with whom they have many reciprocal role interactions than to grandparents with whom they have fewer interactions. This is the culmination of the progressive steps of Kohlberg's theory. Through the role sharing experiences and the inferred cognitive processes, the behavior referred to as a social attachment is established.

5. Differences between "strong" grandchild-grandparent bonds and "weak" bonds on the preceding hypotheses will be greatest when the strong bond is sex-matched and the weak-bond is sex-crossed. The use of strong and weak is meant to indicate many and few reciprocal role interactions, respectively. Kohlberg's theory states that role sharing is facilitated by role similarity and the inferred identification process. Therefore, same-sex attachments should be stronger than opposite-sex attachments between grandchildren and grandparents.

6. The research literature indicates that there may be regular developmental changes in the content of descriptions of others. The pattern is of a change from concrete and "readily observable external features"
to more abstract descriptors, such as the use of psychological variables or role descriptors (Dubin and Dubin, 1965; Little, 1968; Kahana and Kahana, 1970; Scarlett, Press and Crockett, 1971; Friedland, 1973; Livesley and Bromley, 1973). Friedland, in particular, explains:

There appears to be a developmental progression from role concepts based on concrete-specific acts and details to those based on general abstract functions. Children who conceptualize roles at the concrete identification level may have more difficulty inter-relating roles and thus more difficulty in understanding role relations or role reciprocity (1973, pp. 87-88).

The present study hypothesizes that the type of social interaction may affect the nature of descriptors used. Therefore, it is expected that grandchild-grandparent bonds with greater reciprocal role interaction will be characterized by the use of more abstract descriptors, while bonds based on fewer reciprocal interactions will lead to the use of more concrete descriptors.
CHAPTER III
METHODOLOGY

Subjects. The sample consisted of 72 subjects who were interviewed at various locations in Columbus, Ohio. The socioeconomic status of the sample ranged from middle to upper-middle class. No intelligence data were available or collected for the sample. The subjects were randomly selected from individuals who had four living grandparents. These subjects came from three age groups of equal size: age range 4- to 5-years old (mean=4.6); age range 8- to 11-years old (mean=9.3); and age range 14- to 22-years old (mean=19.2). Half of each age group was female and half was male.

Procedure. Before experimental procedures were begun, a Perspective Taking scale was developed. A group of 33 college students was asked to rate 67 items on a Likert-type scale. The items were drawn from scales which purportedly measure empathy and egocentrism (Comprey, 1970, 1968) and from a list of items written for the same purpose by several graduate students. The 33 students were asked to think of their most egocentric relative (defined as "a person who cannot or does not take other people's viewpoint; who doesn't try to see things from other's position") and mark a response.
(from strongly agree to strongly disagree) for each item. Next the student was asked to select his or her most empathic relative (defined as "someone who understands and can feel what another is feeling") and repeat the process with the same items. The procedure was then repeated with the student choosing the least egocentric relative and the least empathic relative. Of the 33 students, 21 said the least egocentric relative was the most empathic, and the least empathic relative was the most egocentric. Hence, not all subjects completed four forms.

Items for the Perspective Taking scale (PT) were selected from these ratings. Each rating was assigned a point value from 1 to 5 (strongly agree=5, agree=4, neutral=3, etc.). Mean values for egocentrism, non-egocentrism, empathy, and non-empathy were calculated for each item. Seven items that indicated high egocentrism but did not indicate low empathy were kept. Seven items that indicated high empathy but not low egocentrism were kept. Seven items that predicted high egocentrism and low empathy, or high empathy and low egocentrism were kept. This approach was taken as a result of the ongoing debate as to whether empathy and egocentrism are independent and distinct factors or if they are dependent upon each other, that is,
inversely related and on a continuum (See Comprey, 1970, 1968; Borke, 1971; Kurdek and Rodgon, 1975; Hoffman, 1975). The Perspective Taking scale of the present study, therefore, contained 7 distinct egocentrism items, 7 empathy items, and 7 items that predicted one of these traits and the inverse of the other (See Appendix D).

During the experimental procedure of the present study, each subject was interviewed for approximately 30 minutes. The subject completed the following measures:

1. **Role Interactions/Role Information Screen**

   On this measure the subject was asked to decide which of his or her four grandparents he or she had the closest reciprocal role interactions with. Following Kohlberg's (1969) discussion of these interactions, guideline questions were provided. After choosing the closest grandparent, the subject answered a set of twelve questions concerning role knowledge of the grandparent (See Appendix A for a copy of the measure). The subject was then given another copy of the screen. He or she was asked to complete the measure for the grandparent with whom he or she had the least reciprocal role interactions (See Appendix A for a copy of the measure).

2. **Written Descriptions**: Each subject was asked to write a description of the two grandparents chosen in the initial screen. Directions which were developed
from Livesley and Bromley (1973) were read to each subject. These directions were designed to elicit the highest levels of descriptors in the subjects' repertoire (See Appendix C for a copy of the instructions).

3. **Perspective Taking scale (PT):** The 21-item Perspective Taking scale followed the two written descriptions. The scale was designed to be a forced-choice measure. The grandparent who was chosen by the subject as being closest was designated as Grandparent One. The grandparent who was chosen as being least close was called Grandparent Two. Each of the 21 items was followed by: GP 1   GP 2. The subject was instructed to circle the person who was best described by the statement. The subject was instructed to circle both GP 1 and GP 2 if the statement applied to either grandparent. The subject was instructed to leave the item blank if it applied to neither.

4. **Attachment scale (AT):** This scale consisted of 50 items which were taken from previously published scales which purport to measure affectional, emotional or instrumental dependency or attachment (Itkin, 1952; Anthony and Bene, 1957; Kogan, 1961; Love and Kaswan, 1974). As with the Perspective Taking scale, items were worded so that the subject was forced to attribute the item to one or the other grandparent. Each item
was followed by: GP 1  GP 2 . If the item applied to both, the subject was told to circle both. If it applied to neither, the subject was instructed to leave it blank.

The administration of the measures was modified for use with younger subjects. Whereas the older subjects (most of the 8- to 11-year olds and all of the 14- to 22-year olds) filled out the measures on their own, the 4- to 5-year olds and several 8- and 9-year olds answered the questions as an interviewer asked them orally. In the first screen the interviewer marked down the subjects' responses. During the written descriptions, the interviewer wrote verbatim what the subject said. The major adaptations were made in the Perspective Taking and Attachment scales. Several words were rewritten and several items were rephrased for the youngest subjects (See Appendix E). In addition, to facilitate cognitive functioning, pictures of grandparents and a "Mr. Nobody" were used. If the child selected two grandfathers, for instance, two drawings of grandfathers were shown to the child. The name that the child called his or her grandfather was then written on the drawing. During the interview, the item was read and the child was asked to point to the person who was best described by the item. If the
item described both grandparents, the subject was told to point to both. The child was also given a stick figure drawing labeled as Mr. Nobody. The child was told to point to Mr. Nobody if the statement did not describe either grandparent. This technique was adapted from a similar technique used in the Family Relations Test (Bene and Anthony, 1957) (See Appendices F and G for copies of the drawings used).

Analysis of data. The data collected from the 12 yes or no questions on the Role Interactions/Role Information Screen were analyzed through Chi-square tests of association.

Data collected in the form of written descriptions were scored with two independent methods. Both methods were designed by Livesley and Bromley (1973) and were reported in their analysis of children's free descriptions of other individuals. The first method was a categorizing process in which each discrete response in the free description was classified as to what type of descriptor it was. Livesley and Bromley developed 33 different categories following an exhaustive analysis of the varieties of descriptive statements made by children. Appendix H contains a copy of the categories used by Livesley and Bromley. In the present study, each description was scored so that a count of the variety of descriptors used by the subject could be obtained. This procedure yielded a
Variety (VAR) score (number of different categories used in one description).

The second scoring method was a determination of the number and proportion of abstract descriptors used in the description. Livesley and Bromley distinguished between peripheral descriptive statements and central descriptive statements, which they also called concrete and abstract, respectively. Concrete statements included statements of appearance and role, for example. Statements which were classified as abstract included personality traits, attitudes and motives, for example. Appendix I includes a list of the descriptors classified as either concrete or abstract. A count of the total number of abstract descriptors used in each written description was made. This yielded a score referred to as Number (NUM). This score was then divided by the total number of descriptive statements in the written description, so that a Proportion (PRO) score (percentage of abstract descriptors used in one description) could be reported. The derivation of the three scores (VAR, NUM, PRO) was identical for both of the grandparent written descriptions. These scores were analyzed as dependent variables in a Three-Way Analysis of Variance (ANOVA) (Hays, 1973).

Two Perspective Taking scores (one for each grandparent) were derived for each subject. The score was
determined by adding the total number of items which indicated empathy or non-egocentrism, and then subtracting the total number of items which indicated a lack of empathy or egocentrism. For purposes of statistical analysis, a constant of 11 was added to each score in order to avoid the use of negative scores. A Three-Way ANOVA was performed on these data.

Two Attachment scores (one for each grandparent) were determined for each of the subjects. The total number of items which indicated positive feelings of affectionate, emotional or instrumental attachment was added. The total number of negative items attributed to the grandparent was then subtracted. This procedure yielded the Attachment score for each grandparent. As with the Perspective Taking score, a constant of 22 was added to each score in order to avoid the use of negative scores. A Three-Way ANOVA was performed on these data.

In summary, the independent variables for the analysis of data included the age group of the subject; the sex of the subject; and the grandparent being described. Dependent variables included the 12 questions from the initial screen; a variety of descriptors score; a number of abstract descriptors score; a proportion of abstract descriptors score; a Perspective Taking score; and an Attachment score. In addition to the previous analyses,
a Pearson Product Moment Correlation was computed for the dependent variables.
Hypothesis one predicted that the data from the Role Interactions/Role Information Screen would indicate that the subjects had greater role knowledge about the grandparent with whom they had more reciprocal role interactions. The findings provided partial support for the hypothesis. Table 1 shows that on all but one question the majority of grandchildren did not know the information requested for either grandparent one or two. In general, however, the percentages indicated that grandchildren were more knowledgeable about grandparent one. A chi-square analysis indicated that significantly more subjects knew grandparent one's middle name than grandparent two's \( (X^2 = 28.5, df = 1, p < .001) \). Significantly more subjects knew the birth month of grandparent one as compared to grandparent two \( (X^2 = 12.4, df = 1, p < .001) \). Statistically significant differences between grandparent one and two were not found for knowledge of age, birthday, eye color, job, or address. However, when asked if they saw similarities between themselves and their grandparents, significantly more subjects said yes about grandparent one as compared to grandparent two \( (X^2 = 4.7, df = 1, p < .05) \).
TABLE 1
Chi-Square Analysis of Role Interaction/Role Information Screen Data

<table>
<thead>
<tr>
<th>Item</th>
<th>Grandparent One Knew</th>
<th>Didn't Know</th>
<th>Grandparent Two Knew</th>
<th>Didn't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middlename</td>
<td>45.8</td>
<td>54.2</td>
<td>5.6</td>
<td>94.4</td>
</tr>
<tr>
<td>Birthmonth</td>
<td>48.6</td>
<td>51.4</td>
<td>19.4</td>
<td>80.6</td>
</tr>
<tr>
<td>Age</td>
<td>37.5</td>
<td>62.5</td>
<td>23.6</td>
<td>76.4</td>
</tr>
<tr>
<td>Birthday</td>
<td>25.0</td>
<td>75.0</td>
<td>13.9</td>
<td>86.1</td>
</tr>
<tr>
<td>Eye color</td>
<td>48.6</td>
<td>51.4</td>
<td>51.4</td>
<td>48.6</td>
</tr>
<tr>
<td>Job</td>
<td>70.8</td>
<td>29.2</td>
<td>56.9</td>
<td>43.1</td>
</tr>
<tr>
<td>Address</td>
<td>41.7</td>
<td>58.3</td>
<td>34.7</td>
<td>65.3</td>
</tr>
<tr>
<td>Others mention similarities</td>
<td>19.4</td>
<td>80.6</td>
<td>18.1</td>
<td>81.9</td>
</tr>
<tr>
<td>Subject sees similarities</td>
<td>31.9</td>
<td>68.1</td>
<td>15.3</td>
<td>84.7</td>
</tr>
</tbody>
</table>

All scores are reported as mean percentages.

-34-
Hypothesis Two predicted that grandchildren would exhibit greater cognitive complexity in descriptions of the grandparent with whom they had more reciprocal role interactions. The data strongly confirmed the hypothesis. For all subjects, the number of different types of descriptors (Variety score) was greater for grandparent one. This difference was statistically significant beyond the .001 level of significance (see Table 2). The Analysis of Variance for Variety score also indicated statistically significant age differences \((p<.001)\) and a significant interaction \((p<.001)\) between age and type of grandparent being described. The Newman-Keuls method for analyzing significant differences was employed to interpret these findings. Results of this procedure are reported in Table 3. The data for age differences indicated that the oldest group was significantly different from the middle and youngest groups. However, the variety scores of the youngest and middle groups were not significantly different.

The data for the interaction between age and grandparent being described showed an interesting pattern (see Table 3). Both the middle and oldest groups used a significantly greater variety of categories in their descriptions of grandparent one as compared to grandparent two. For the youngest group this pattern
TABLE 2
Analysis of Variance for Variety (VAR) Scores

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRANDPARENT</td>
<td>46.69</td>
<td>46.69</td>
<td>66</td>
<td>27.7</td>
<td>.001</td>
</tr>
<tr>
<td>AGE</td>
<td>463.10</td>
<td>231.55</td>
<td>66</td>
<td>89.15</td>
<td>.001</td>
</tr>
<tr>
<td>AGE X GRANDPARENT</td>
<td>66.93</td>
<td>33.47</td>
<td>66</td>
<td>19.88</td>
<td>.001</td>
</tr>
</tbody>
</table>
TABLE 3  
Newman-Keuls Analysis for VAR Scores

<table>
<thead>
<tr>
<th>AGE</th>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.02</td>
<td>3.17</td>
<td>6.90</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(n.s.)</td>
<td>(0.01)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRANDPARENT</th>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.93</td>
<td>3.80</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>2.67</td>
<td>3.96</td>
</tr>
<tr>
<td>GP 2</td>
<td>3.38</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td>(n.s.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
</tbody>
</table>

(n.s.) (0.05) (0.01)
did not hold true. No significant difference was found between grandparent one VAR score and grandparent two VAR score for the youngest subjects.

Hypothesis Three predicted that grandchildren would attribute greater perspective taking ability to grandparent one, the grandparent with whom they had more reciprocal role interactions. Table 4 contains the results of the ANOVA. The data strongly confirmed the hypothesis. Grandchildren attributed a significantly greater number of items indicating perspective taking ability to grandparent one ($p<.001$). The data also contained significant age differences and a significant interaction between age and type of grandparent being described. The Newman-Keuls comparisons (see Table 5) indicated that there was a statistically significant increase with age in perspective taking for grandparent one and a corresponding decrease in perspective taking for grandparent two. Table 5 indicates that only the youngest subjects did not differentiate between grandparent one and grandparent two.

Hypothesis Four predicted that grandchildren would express more emotional, affective and instrumental dependence and would attribute stronger feelings of affection to grandparent one. The ANOVA for Attachment scale scores (AT) appears in Table 6. The data
### TABLE 4

**Analysis of Variance for Perspective Taking (PT) Scores**

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grandparent</td>
<td>1626.77</td>
<td>1626.77</td>
<td>66</td>
<td>146.31</td>
<td>.001</td>
</tr>
<tr>
<td>Age</td>
<td>98.60</td>
<td>49.30</td>
<td>66</td>
<td>4.62</td>
<td>.013</td>
</tr>
<tr>
<td>Age x Grandparent</td>
<td>1448.85</td>
<td>724.42</td>
<td>66</td>
<td>65.15</td>
<td>.001</td>
</tr>
</tbody>
</table>
TABLE 5
Newman-Keuls Analysis for PT Scores

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.94</td>
<td>12.67</td>
<td>11.06</td>
</tr>
</tbody>
</table>

---------- (.05)
--- --- --- (n.s.)
--- --- --- (n.s.)

<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.58</td>
<td>8.86</td>
</tr>
</tbody>
</table>

---------- (.001)

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>GP 2</td>
<td>GP 1</td>
</tr>
<tr>
<td>12.58</td>
<td>13.29</td>
<td>15.71</td>
</tr>
</tbody>
</table>

---------- (.01)
---------- (.01)
---------- (.05)
---------- (.05)
---------- (.01)
---------- (.01)
--- --- --- (n.s.)
---------- (.01)  
---------- (.01)
### TABLE 6
Analysis of Variance for Attachment (AT) Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grandparent</td>
<td>11342.25</td>
<td>11342.25</td>
<td>66</td>
<td>167.92</td>
<td>.001</td>
</tr>
<tr>
<td>Age</td>
<td>1203.79</td>
<td>604.40</td>
<td>66</td>
<td>9.24</td>
<td>.001</td>
</tr>
<tr>
<td>Age X Grandparent</td>
<td>7653.04</td>
<td>3826.52</td>
<td>66</td>
<td>56.65</td>
<td>.001</td>
</tr>
</tbody>
</table>
strongly confirmed the hypothesis. Higher AT scores were also found for grandparent one, the difference being significant beyond the .001 level of significance. A statistically significant age difference and a significant interaction between age and grandparent were also found (for both differences, p<.001). The Newman-Keuls comparisons (see Table 7) indicated that the youngest group had the highest mean AT score and that the score was significantly different from the middle and oldest groups. However, the mean AT scores did not reflect the specific interaction effects. The interaction effects indicated that the AT scores of the youngest group were virtually identical for both grandparents. The middle group scored somewhat higher for grandparent one and significantly lower for grandparent two. The oldest group had significantly higher and lower AT scores for grandparent one and grandparent two than the middle or youngest group. The data indicated that for the youngest subjects there was no differentiation in AT scores between the two grandparents. For the middle and oldest groups the AT scores between grandparent one and two were significantly different. The significant difference between AT score for grandparent one and AT score for grandparent two increased with age. As such, the oldest group had the
### TABLE 7
Newman-Keuls Analysis for AT Scores

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.29</td>
<td>28.27</td>
<td>26.44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.21</td>
<td>20.46</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.33</td>
<td>33.25</td>
<td>36.96</td>
</tr>
<tr>
<td>44.33</td>
<td>8.54</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.58</td>
<td>19.58</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.33</td>
<td>8.54</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.33</td>
<td>8.54</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.33</td>
<td>8.54</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.33</td>
<td>8.54</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.33</td>
<td>8.54</td>
<td></td>
</tr>
</tbody>
</table>
highest AT score (for grandparent one) and the lowest AT score (for grandparent two). Figure One illustrates these differences.

Hypothesis Five predicted that because attachment is facilitated by role similarity (according to Kohlberg), the strong bond with grandparent one would tend to be sex-matched and the weaker bond with grandparent two would tend to be sex-crossed. The data did not provide direct support for this hypothesis. Table 8 indicates that the chi-square analysis did not reveal significant differences in the predicted direction. For female subjects, however, there was a trend toward choosing a female as grandparent one. A separate chi-square analysis for female subjects indicated significant differences among the three age groups of females. The finding of a significant difference appeared to be attributable to the oldest group of females. Every subject in this age group chose a female as grandparent one (see Table 8). Among females there was no trend toward choosing either a female or a male for grandparent two. Among male subjects, there were no discernable trends toward choosing a male or a female for either grandparent one or grandparent two.

Hypothesis six predicted that an analysis of the subjects' written descriptions of grandparents
FIGURE ONE
Group Differences for VAR, PT, and AT Scores

Group 1  Group 2  Group 3

VAR Score

GP 1  GP 2  GP 1  GP 2

PT Score

GP 1  GP 2  GP 1  GP 2

AT Score

GP 1  GP 2  GP 1  GP 2
TABLE 8
Chi-square Analysis of Difference Between Sex of Subject and Sex of Grandparent

<table>
<thead>
<tr>
<th>Sex of Grandparent One</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>F</td>
<td>9</td>
<td>27</td>
</tr>
</tbody>
</table>

\( \chi^2 = 3.00, \ df = 1, \ p > .05 \)

<table>
<thead>
<tr>
<th>Sex of Grandparent Two</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>F</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

\( \chi^2 = 0.056, \ df = 1, \ p > .05 \)

<table>
<thead>
<tr>
<th>Sex of Grandparent One</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Group 2</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Group 3</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

\( \chi^2 = 8.43, \ df = 1, \ p < .05 \)
would indicate an increase in the use of abstract descriptors as age increased. The data provided statistically significant support for the hypothesis (see Table 9). The oldest group used significantly more abstract descriptors than the middle group. While the middle group used nearly three-and-one-half times the number of abstract descriptors than the youngest group, this difference did not reach the .05 level of significance. The proportion of abstract vs. concrete descriptors used by the middle group was significantly greater than the youngest group. The oldest group also used a significantly greater proportion of abstract descriptors than both the youngest group and the middle group (see Table 11 for these results).

Hypothesis Six also predicted that the greater social interaction between grandchildren and their grandparent one would lead to a greater use of abstract descriptors in the written statements about grandparent one. Tables 9 and 10 indicate that for both measures (number and proportion of abstract descriptors) scores were significantly higher for grandparent one. The Newman-Keuls analysis of differences among the age group means (see Tables 11 and 12) indicated that the differences were attributable to the middle and oldest groups. For the youngest group no
TABLE 9
Analysis of Variance for Number of Abstract Descriptors (NUM)

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRANDPARENT</td>
<td>91.84</td>
<td>91.84</td>
<td>66</td>
<td>39.01</td>
<td>.001</td>
</tr>
<tr>
<td>AGE</td>
<td>1641.01</td>
<td>820.51</td>
<td>66</td>
<td>88.72</td>
<td>.001</td>
</tr>
<tr>
<td>AGE X GRANDPARENT</td>
<td>124.01</td>
<td>62.01</td>
<td>66</td>
<td>26.34</td>
<td>.001</td>
</tr>
</tbody>
</table>
TABLE 10
Newman-Keuls Analysis for NUM Scores

<table>
<thead>
<tr>
<th></th>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.69</td>
<td>2.38</td>
<td>8.53</td>
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<td>(n.s.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.01)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>GP 1</th>
<th>GP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.67</td>
<td>3.07</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GP 1</td>
<td>GP 2</td>
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<td>.88</td>
<td>2.92</td>
</tr>
<tr>
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<tr>
<td></td>
<td></td>
<td>1.83</td>
<td>10.58</td>
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<td>43772.80</td>
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<td>AGE X GRANDPARENT</td>
<td>4639.85</td>
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Table 12
Newman-Keuls Analysis for PRO Scores

<table>
<thead>
<tr>
<th>Youngest</th>
<th>Middle</th>
<th>Oldest</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.33</td>
<td>52.48</td>
<td>73.96</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 1</td>
<td>GP 2</td>
<td></td>
</tr>
<tr>
<td>50.76</td>
<td>43.08</td>
<td></td>
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<table>
<thead>
<tr>
<th>GP 1</th>
<th>GP 2</th>
<th>GP 1</th>
<th>GP 2</th>
<th>GP 1</th>
<th>GP 2</th>
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<tr>
<td>10.21</td>
<td>18.46</td>
<td>61.17</td>
<td>43.79</td>
<td>80.92</td>
<td>67.00</td>
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</table>

-51-
significant differences were found between grandparent one and grandparent two on either of the measures. The middle group apparently accounted for the difference found when the measure was proportion of abstract descriptors. Only the middle group showed a significant difference between grandparent one and grandparent two on this measure (see Table 12). On the number of abstract descriptors measure only the oldest group showed a significant difference between grandparent one and grandparent two (see Table 10). Thus, this group apparently accounted for the overall difference found using the latter measure.

The results of the Pearson Product Moment Correlations are presented in Table 13. The correlations were computed separately for grandparent one scores and grandparent two scores. The correlations between Attachment score and the cognitive measures from the written descriptions (VAR, NUM, PRO) were positive and significant in the case of grandparent one. For grandparent two they were negative and significant. These results add support to the argument that there were significant differences in the ways that grandparent one and grandparent two were perceived by grandchildren. The correlations also indicated a significant relationship between measures of cognitive functioning (VAR,
TABLE 13
Correlations Among the Dependent Variables
For Grandparent One and Grandparent Two

<table>
<thead>
<tr>
<th></th>
<th>VAR</th>
<th>NUM</th>
<th>PRO</th>
<th>PT</th>
<th>AT</th>
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<tbody>
<tr>
<td><strong>GRANDPARENT ONE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>.54</td>
<td>.74</td>
<td>1.00</td>
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<td>PT</td>
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<td>.55</td>
<td>.58</td>
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<td>AT</td>
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<td>.43</td>
<td>.36</td>
<td>.48</td>
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(All coefficients are significant beyond the .01 level of significance)

<table>
<thead>
<tr>
<th></th>
<th>VAR</th>
<th>NUM</th>
<th>PRO</th>
<th>PT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRANDPARENT TWO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>PRO</td>
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<tr>
<td>PT</td>
<td>-.43</td>
<td>-.59</td>
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<tr>
<td>AT</td>
<td>-.32</td>
<td>-.55</td>
<td>-.54</td>
<td>.75</td>
<td>1.00</td>
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</tbody>
</table>

(All coefficients are significant beyond the .01 level of significance)
NUM, PRO) and measures of affective or emotional functioning (PT and AT).
The research findings of the present study provide strong support for the argument that psychologists have not sufficiently studied the process of attachment as it occurs across the lifespan. The data clearly indicate that consistent age differences are found in the measurement of variables which relate to attachment. Hence it is apparent that attachment may not be a process which occurs only in the first two years of life. Rather, there may be many potentially significant interactions which occur from childhood through late adulthood which affect the course of attachment behavior across the lifespan. The implication appears to be that psychologists should widen the focus of their attention to include the study of attachment behavior which may occur in later life. Likewise, the evidence supports the position that attachment behaviors may be important even when no clear caretaker relationship exists. As such, there appears to be a need for further studies which attempt to investigate the attachment process in non-caretaker relationships.

The general implication of the research findings suggests that the study of attachment should focus not only on the social interactions and the affective components
of the attachment process, but on the cognitive components as well. Specific evidence for this argument comes from two areas in the research findings. The first is that the three age groups in the study represent more than simple chronological groupings. Though tests of cognitive ability were not used in the selection of subjects, it is probably safe to assume that the groups corresponded with three levels of cognitive functioning. The youngest group was selected so that members would probably be at the preoperational stage of Piaget's theory. The middle group was selected to correspond with the concrete operational stage. Subjects chosen for the oldest group were assumed to be capable of formal operational thought. As a result, the age differences reported in the results may indicate the differential effect of the subject's cognitive level. A specific example comes from an analysis of the Perspective Taking scores. For the middle and oldest groups, scores for grandparent one and grandparent two were significantly different. Fewer egocentric statements and more statements indicating empathy were attributed to grandparent one. For the youngest group, however, no significant difference was found between grandparent one and grandparent two PT scores. The literature on the cognitive abilities of the preoperational child notes his or her inability to understand the perspective of the other. This presumed cognitive egocentrism
may fade with further development, but it may also mediate the social interactions in which the young child participates. Thus, the data of the present study may be interpreted in the following manner. Subjects in the youngest group who are egocentric may be blocked from understanding empathy and egocentrism in others (in this case, their grandparents). As such, these subjects might not differentiate between grandparent one and grandparent two and would therefore not rate them differently on the PT scale. Subjects in the middle and oldest groups would presumably have the cognitive ability to see the other's viewpoint and feelings more accurately. These subjects might then differentiate between grandparent one and grandparent two on the PT scale. The research findings seem to be congruent with this explanation.

The second area of evidence that stresses the importance of cognitive processes in an understanding of attachment comes from the measures which were designed to examine cognitive functioning. These included the data from the written descriptions which were reported as the Variety score (VAR), the Number of Abstract Descriptors score (NUM), and the Proportion of Abstract Descriptors score (PRO). Scores for grandparent one were significantly higher than for grandparent two on each of these measures. Clearly, if grandparent one and grandparent two represent different types of social interaction for the grandchild, then an
interaction between social transactions and cognitive processes may exist. The age group differences for these measures also present interesting information. Table 3 indicated that the middle group used a significantly greater variety of categories in descriptions of grandparent one as compared to grandparent two. The oldest group's VAR scores indicated that the difference between grandparent one and grandparent two became even greater. The youngest group, however, showed no difference. This provides strong evidence that developmental changes in descriptions of the two grandparents may be concurrent with changes in cognitive structure which may accompany age. As will be seen, this relates importantly to Kohlberg's explanation of the attachment process. The case is similar though not as pronounced with the NUM and PRO scores. The fact that NUM and PRO scores do not show identical patterns does not seem to be significant. Livesley and Bromley (1973) indicate that in general the measures are identical but that the interaction of the subject's sex and the sex of the person being described may cause variation in some cases.

In an attempt to explore the cognitive-developmental aspects of attachment, the present study focused on Kohlberg's theoretical explanation of attachment (1969). To the extent that the study was a test of predictions
generated by Kohlberg's writing, the research findings provide support for the theory. Specifically, the findings provide support in three areas. The first is the previously mentioned differences between grandparent one and grandparent two on the measures of cognitive functioning. It appears that changes in the type of role transactions may be reflected in measures of cognitive functioning. The second area is the finding that significant differences in emotional, affective and instrumental dependence existed between the two grandparents. In other words, relationships which differ in the type of reciprocal role interactions may also differ in the degree of attachment. This is the essence of Kohlberg's theory and the research findings seem to support his contention. The third area of support deals with the question of age differences. It is significant to note that for each measure (VAR, NUM, PRO, PT, AT) no differences existed between grandparent one and grandparent two for the youngest group. Kohlberg's theory predicts that these results would be found. Kohlberg argues that young children do not develop the presumed cognitive capability to understand reciprocal role interactions until approximately age five to six years. Because the subjects in the youngest group had not reached this age level they would not be expected to comprehend role transactions. As such they would not differentiate
between grandparent one and grandparent two on the various measures. With an increase in age and with the presumed changes in cognitive structure and functioning, the subject would become increasingly aware of reciprocal role interactions. Greater differentiation between grandparent one and grandparent two should accompany the increased understanding. The research findings confirm this pattern and therefore support Kohlberg's theory.

While the data of the present study provide support for the processes which Kohlberg has postulated, questions about the dynamics of these processes remain. One problem area relates to the interaction of cognitive and affective development. Even though Kohlberg has claimed that these aspects develop together and are not discrete his explanation of the interaction may not be sufficient. Certainly affective responses may be experienced as a result of satisfying or rewarding role transactions. This explanation, however, would reduce role transactions to simple behavioristic paradigms. As such, the question of how cognitive understandings and affective feelings of role interactions develop together would remain open. It is fair to criticize both Kohlberg's theory and the present study on this point. The present study only adds support to Kohlberg's hypothesis that the cognitive and affective aspects may be associated in a significant way. It does not explain the process. The

-60-
research findings may, however, point to an area that may be fruitful for psychologists to explore further. That area is the study of empathy and its expression in early childhood. The research findings indicated that the degree of perceived empathy was significantly related to the type of reciprocal role interactions and to attachment. As Hoffman's (1975) discussion indicated, empathy is clearly a behavior in which cognitive and affective aspects may be interwoven. The implication of this discussion is that Kohlberg's theory might be strengthened if it were modified to include research findings about the development of empathy.

A second and final problem area in Kohlberg's theory involves the transitional time period around the fifth and sixth years. During this time the child acquires the cognitive abilities which Kohlberg postulates are necessary for reciprocal role interactions. Kohlberg does not, however, explain how social interactions contribute to these presumed cognitive structural changes. Psychologists do not understand sufficiently how the cognitive ability to make groupings becomes translated into action which may be used in social interactions. This appears to be a weak link in Kohlberg's theory and a critical issue to which researchers might address themselves. Some specific research questions that might be raised include the
following. Are social attachments inhibited by the egocentrism and or the lack of empathy of either participant? What are the developmental relationships between empathy, egocentrism, altruism and social attachments? Are children's friendship patterns or attachments affected by those behaviors which may involve a significant cognitive-affective interaction? It would seem that these questions and others along the same line need to be addressed by any theory which attempts to explain the cognitive-developmental aspects of the attachment process.

The distinct pattern of significant differences which the youngest group exhibited tends to support Harre's hypothesis that there may be at least two qualitatively different social worlds during childhood. The research findings indicated that although young children expressed strong attachment toward their grandparents, they did not differentiate on the basis of reciprocal role interactions. A strict interpretation of Kohlberg's theory might hold that these young children simply did not really form an attachment as yet. The data contradict this statement. The youngest group had the highest mean AT score for both grandparents. Hence, Kohlberg's theory may need to be modified to accommodate the data. It is Harre's argument that seems to provide the most acceptable explanation. In simple form it would imply that early attachments are
qualitatively different from later attachments. The young child does not form an adult-like attachment because of the presumed cognitive limitations. But the child may form a strong attachment bond with another. In Harre's explanation, the processes which govern the earlier attachments belong to the autonomous social world of childhood. During the course of development, these processes are replaced by processes which are more characteristic of the adult social world. Because these processes allow the child to practice adult-like behavior, they are considered to be a part of the precursor social world of childhood.

The central theoretical dilemma is the identification of the processes involved and the explanation of why they show developmental trends. In addressing this dilemma, it may be interesting to note the specific changes which are thought to occur in the course of development. Schaffer and Emerson (1964) have indicated that predictable changes in the nature of attachment occur between the sixth and the eighth months of life. Research stemming from Bowlby's theoretical position has indicated that a change in the nature of attachment behavior seems to begin in the third year of life. By the end of this year the child's attachment behavior may be regarded as qualitatively different because of a marked decline in the frequency of
proximity-seeking behaviors. Kohlberg's research and the findings of the present study indicate that the years from six to eight may be another change point in the developmental trend. As the present study concluded, attachment behavior in subjects who are older than this age may be qualitatively more adult-like than the attachment behavior of younger subjects. This pattern of change shows remarkable similarities to the pattern of change in cognitive structure which developmental psychologists have studied following the work of Piaget. Specifically, evidence has accrued indicating that the primary caretaker may begin to become an object with permanence during the sixth and seventh months of life. There is general support that a new stage of cognitive operations comes to dominate the child's behavior as the third year of life progresses. This is Piaget's preoperational stage, in which the child begins to move beyond his or her dependence on sensorimotor experience with the environment. Finally, additional cognitive changes seem to occur from age six to eight as the child gradually moves into Piaget's stage of concrete operational thought. At this time, the child may also begin to exhibit less egocentric behavior, due again to the postulated changes in cognitive structure. These parallel trends in the development of attachment behavior and cognitive behavior strongly suggest that the two areas
may be linked together in a significant relationship.

To present a comprehensive theory of attachment formation that would incorporate these parallel changes in cognitive structure and attachment behavior is beyond the scope of the present study. However, a general outline might be forwarded as an hypothesis. The present investigator feels that the research evidence strongly supports Bowlby's theory of attachment formation. As Harre has indicated, though, it is a theory that may lose its effectiveness if it is generalized beyond the first three years of life. It appears that specific cognitive structural changes occur in the second and third years of life as Piaget has elaborated them. One might hypothesize, therefore, that with a careful analysis of the social significance of the change from sensorimotor operations to preoperational thought, psychologists may better understand the change in attachment behavior which occurs concurrently. A comprehensive theory might then incorporate Kohlberg's work to account for the developmental changes which appear to occur around ages six to eight years. This would demand a careful analysis of the development from preoperational thought to concrete operational thought in order to better understand the processes which may have significance for social interactions. The present research findings indicated, as many studies have, that egocentrism and
empathy may be significantly related to the process of social attachment. An overall theoretical structure of this type would satisfy Harre's criticism and take into account the postulated two distinct social worlds of childhood. It would modify Kohlberg's theory so that the processes of empathy and egocentrism would be specifically analyzed. This structure would also include the important work of Bowlby in the study of early attachments, while at the same time offering a solution to the problems which have resulted from generalizing his theory to later life. A justified criticism of the literature on attachment is that the studies are fragmented and difficult to integrate into a meaningful whole. An attempt to formulate an overall theoretical structure that could accommodate and integrate these diverse findings might be beneficial to the study of attachment behavior.

Aside from the theoretical importance of the bond between grandchildren and grandparents, there are several points which make this interaction uniquely interesting. The main question is why this interaction fits into Kohlberg's theory as well as it does. In other words, given the postulate that role transactions become more important with age, why do transactions with grandparents necessarily follow this pattern? Neugarten and Weinstein (1964) found two trends common among American grandparents.
The first was a traditional role of being nurturant, warm and indulgent toward the child while at the same time avoiding an authority position. This seems congruent with the perceptions of the youngest subjects of the present study. These children expressed warmth and strong feelings of attachment regardless of the reciprocal role interactions. A second trend found by Neugarten and Weinstein was that many grandparents felt that the significance of their role was "biological continuity" or a continuation of the family. This trend seems to be related to role transactions. It is perhaps helpful in interpreting a sex difference in the research findings. In the oldest group of subjects, all the females chose a female as grandparent one. If the grandparent is interested in continuity, he or she may try to give the grandchild something which may last after the grandparent dies. In this case, a female-female interaction may be at an advantage over other interactions. If a woman has been a homemaker for life, for instance, she may continue this role through grandparenthood and it may be salient to the granddaughter whose interests are in homemaking skills. When the grandfather retires, however, he may leave his occupational role behind. This may create a less clear and less salient role for the grandson to observe. Obviously the situation could be reversed. But when the traditional female role is emphasized, female-
female interactions might involve more role transactions. This would be a possible explanation of the research findings. And it might also be an example of why Kohlberg's theory may be helpful in understanding the grandchild-grandparent bond.

The complexities of the grandchild-grandparent bond deserve a detailed analysis of the behavior of both participants. The present study can be criticized for concentrating only on the grandchild. An ideal study might include a large sample of grandchildren paired with their grandparents. This group would need to be matched on age, sex, sociological factors that might be significant (such as ethnic or religious background), as well as on types and amounts of role interactions, and types of roles taken by the grandparents. In a highly mobile society which is characterized by the wide dispersion of family members so that only the nuclear family resides together, this task is monumental. It may be that an in-depth analysis of the behavior of a single grandchild-grandparent pair would provide just as valuable information. Nonetheless, the present study has indicated several potentially important processes. Further research into the significance of reciprocal role interactions in the attachment process clearly seems warranted.
CHAPTER VI
SUMMARY

In order to investigate attachments which may be formed beyond the infancy period and which may involve persons who are not caretakers, the present study was designed to study the grandchild-grandparent bond. The study was also designed as a test of Kohlberg's (1969) cognitive-developmental theory of attachment. It was hypothesized that grandchildren would hold different views of grandparents with whom they had fewer or more reciprocal role interactions. Specifically, the study hypothesized that grandchildren would attribute more perspective-taking ability and stronger feelings of attachment to grandparents with whom they had more reciprocal role interactions. It was also hypothesized that in written descriptions of these grandparents, grandchildren would use more abstract descriptors and a wider variety of role descriptors. Finally it was hypothesized that the amount of role knowledge about the grandparent would be greatest when the amount of reciprocal role interactions was high. It was hypothesized that the differences in each case would be greatest when the grandchild-grandparent bond was sex-matched.

Three age groups of subjects (ages 4 to 5; ages 8
to 11; ages 14 to 22) were selected with 24 subjects in each group. The subjects were chosen evenly by sex. Each subject who was selected had four living grandparents. Each was asked to select the grandparent with whom he or she had the most reciprocal role interactions and the grandparent with whom he or she had the least. Subjects were then asked to complete written descriptions of each grandparent and to complete a Perspective Taking scale and an Attachment scale for each.

The results tended to confirm the hypotheses and provided support for Kohlberg's cognitive-developmental theory of attachment. The data indicated that cognitive functioning, amount of attributed empathy and egocentrism and amount of attachment or dependency all changed depending on the amount of reciprocal role interactions. The results were interpreted as support for the argument that cognitive development and the development of attachment behavior may be significantly interwoven. An overall structural approach to attachment was proposed to allow the integration of Bowlby's and Kohlberg's theories, and to explain the research findings of the present study.
APPENDIX A

Role Interaction/Role Information Screen

PART ONE

In Part One we want to determine which one of your grandparents you have the most and closest "role interactions" with. Role interactions are determined by a number of things. Please read the following questions. Then choose the one grandparent of yours who best fits all or most of these questions.

1. When at a family gathering, which grandparent would you interact with most?

2. If one of your grandparents paid a surprise visit to you, which would you hope it would be?

3. On a long trip in a car, which grandparent would you like to have with you?

4. Which one of your grandparents do you see the most often?

5. Overall, with which grandparent do you have the most interactions and the closest interactions?

The one grandparent who best fits these questions is _________________________

Now, please answer these questions about the grandparent you've chosen.

1. What sex is this grandparent? Male Female

2. This grandparent is my father's parent my mother's parent

3. Do you know this grandparent's middle name? Yes No

4. Do you know how old this person is? Yes No Age ______

5. Do you know what month this person was born in? Yes No

6. Do you know the exact birthday of this person? Yes No

7. Does any part of your name come from this person's name? Yes No Part of name ________________

8. Do you know the color of this person's eyes? Yes No

9. What is (or was) this person's job? __________________

10. Do you know this person's mail address? Yes No

11. Do you feel that you look or act like this person? Yes No

12. Do others say that you look or act like this person? Yes No
PART TWO

In Part Two we want to determine which one of your grandparents you have the least closest "role interactions" with. Role interactions are determined by a number of things. Please read the following questions. Then choose the one grandparent of yours who best fits all or most of these questions.

1. When at a family gathering, which grandparent would you interact with the least?

2. If one of your grandparents paid a surprise visit to you, which one would you hope it would not be?

3. On a long trip in a car, which grandparent would you least like to have with you?

4. Which one of your grandparents do you see the least often?

5. Overall, with which grandparent do you have the fewest interactions and the least close interactions?

The one grandparent who best fits these questions is _______________________

Now, please answer these questions about the grandparent you've chosen.

1. What sex is this grandparent? Male Female

2. This grandparent is my father's parent my mother's parent

3. Do you know this grandparent's middle name? Yes No

4. Do you know how old this person is? Yes No Age _______

5. Do you know what month this person was born in? Yes No

6. Do you know the exact birthday of this person? Yes No

7. Does any part of your name come from this person's name? Yes No Part of name _______________________

8. Do you know the color of this person's eyes? Yes No

9. What is (or was) this person's job? ________________

10. Do you know this person's mail address? Yes No

11. Do others say that you look or act like this person? Yes No

12. Do others say that you look or act like this person? Yes No
APPENDIX B

Written Descriptions Form

PART ONE

GRANDPARENT'S NAME _________________________________
(the person with whom you have the most interactions)

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
APPENDIX B (continued)

PART TWO

GRANDPARENT'S NAME _____________________________________________

(the person with whom you have the least interactions)

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

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__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

-74-
These descriptions are being used to measure how you see, understand and describe your grandparents, and how you think and feel about them. Look at the grandparent's name at the top of the page. Think about that person and describe him or her as carefully as you can. We do not want to know how tall they are, or whether they are fat or thin, whether they have brown eyes or blue eyes, dark hair or light hair. We do not want to know what kind of clothes they wear. Instead, we want you to tell us what sort of person they are. We want you to tell us what you think and feel about them, and what they are like. Write out your description, and please try to fill as much of the page as you can.
APPENDIX D

Perspective Taking Scale

GRANDPARENT ONE _______________________________________
GRANDPARENT TWO _______________________________________

1. This person is bossy.
   GP 1   GP 2

2. I feel that I get along with this person very well.
   GP 1   GP 2

3. I would go to this person for comfort.
   GP 1   GP 2

4. This person has grown wiser as he or she has grown older.
   GP 1   GP 2

5. This person doesn't like to play and joke with me.
   GP 1   GP 2

6. This person is always willing to think only the best of me.
   GP 1   GP 2

7. This person doesn't like to spend time with his or her grandchildren.
   GP 1   GP 2

8. This person is affectionate.
   GP 1   GP 2

9. This person is very relaxing to be with.
   GP 1   GP 2

10. I get along with this person not very well.
    GP 1   GP 2

11. I consider myself very close to this grandparent.
    GP 1   GP 2

12. I feel that this person does not love me enough.
    GP 1   GP 2

-76-
13. This person never sees anybody's viewpoint but their own.

GP 1  GP 2

14. This person doesn't try hard to see how I see things.

GP 1  GP 2

15. This person is not selfish.

GP 1  GP 2

16. This person thinks people should see things the same way they do.

GP 1  GP 2

17. This person smiles when I'm happy.

GP 1  GP 2

18. This person doesn't know when to stop teasing.

GP 1  GP 2

19. This person knows when I need help.

GP 1  GP 2

20. This person would share their food with someone who looked hungry.

GP 1  GP 2

21. This person does not understand my feelings.

GP 1  GP 2
APPENDIX E
Attachment Scale

GRANDPARENT ONE ______________________________________
GRANDPARENT TWO ______________________________________

1. This person treats me like a baby.
   GP 1   GP 2
2. This person knows how I think and feel.
   GP 1   GP 2
3. This person doesn't see other people's viewpoints.
   GP 1   GP 2
4. This person knows when to offer me help and when not to.
   GP 1   GP 2
5. This person doesn't take time for me or what's important to me.
   GP 1   GP 2
6. This person gets upset when somebody else gets hurt.
   GP 1   GP 2
7. This person understands what makes me tick.
   GP 1   GP 2
8. This person would explain it again if I didn't understand it.
   GP 1   GP 2
9. This person can tell when I'm nervous.
   GP 1   GP 2
10. This person always thinks I'm wrong.
   GP 1   GP 2
11. This person decides things without asking me.
    GP 1   GP 2
12. This person sometimes laughs if somebody gets hurt.
    GP 1   GP 2
13. I believe that this person finds fault with me more often than I deserve.
   GP 1  GP 2

14. This person has been one of the best friends I have had.
   GP 1  GP 2

15. This person takes a great interest in everything that concerns his or her grandchildren.
   GP 1  GP 2

16. This person does not like to hug or kiss me.
   GP 1  GP 2

17. This person makes excessive demands for love and reassurance.
   GP 1  GP 2

18. I would not like to be the same kind of grandparent that this person has been.
   GP 1  GP 2

19. This grandparent is a helpful person.
   GP 1  GP 2

20. This grandparent is a suspicious person.
   GP 1  GP 2

21. I like to spend as much of my time as I can with this person.
   GP 1  GP 2

22. This grandparent shows affection when he or she is happy.
   GP 1  GP 2

23. I do not particularly respect this grandparent.
   GP 1  GP 2

24. This grandparent is a considerate person.
   GP 1  GP 2
APPENDIX E (continued)

GRANDPARENT ONE ____________________________________
GRANDPARENT TWO ____________________________________

25. This person seldom does little things for his or her grandchildren to show affection or consideration.
   GP 1 GP 2

26. This person often praises his or her grandchildren.
   GP 1 GP 2

27. I would go to this person for protection or reassurance.
   GP 1 GP 2

28. This grandparent is a kind person.
   GP 1 GP 2

29. This grandparent is a cold person.
   GP 1 GP 2

30. This grandparent is a trustful person.
   GP 1 GP 2

31. This grandparent is rather critical of his or her grandchildren.
   GP 1 GP 2

32. This person is always doing little things to show affection.
   GP 1 GP 2

33. I believe that this person underestimates my ability.
   GP 1 GP 2

34. This grandparent tells me that he or she likes me.
   GP 1 GP 2

35. This person bores others by talking about the old days.
   GP 1 GP 2

36. This grandparent is one of the most admirable persons I know.
   GP 1 GP 2

37. This person is so attached to his or her grandchildren that he or she wants to have them around all the time.
   GP 1 GP 2

-80-
38. I am nice to this person one moment and angry at him or her the next.
   GP 1   GP 2
39. I am often annoyed by this grandparent.
   GP 1   GP 2
40. I like this person better than the other.
   GP 1   GP 2
41. I admire this grandparent.
   GP 1   GP 2
42. This grandparent is an understanding person.
   GP 1   GP 2
43. I feel that this grandparent complains too much.
   GP 1   GP 2
44. I would go to this grandparent if I wanted affection.
   GP 1   GP 2
45. When I'm not with this person, I worry that something bad may happen to him or her.
   GP 1   GP 2
46. I would not go to this grandparent if I wanted help.
   GP 1   GP 2
47. This person is sometimes critical of his or her grandchildren.
   GP 1   GP 2
48. I would go to this grandparent for comfort.
   GP 1   GP 2
49. I am not very warmly attached to this grandparent.
   GP 1   GP 2
50. I would be most upset if this grandparent was hurt.
   GP 1   GP 2
APPENDIX F

Grandparent Drawings
APPENDIX H

Categories Used to Determine Variety Score

I. Objective Information
1. Appearance
References to external qualities, that is, physical build, facial appearance, clothing, and so on, including approvals, 'He is tall', 'She is pretty', 'He has blue eyes', 'He has fair hair'.

2. General information and identity
The person's name, age, sex, nationality, religion, residence, school and physical environment, for example, 'He lives at ...', 'He is a catholic', 'He goes to our school', 'She will be 10 years old on Wednesday'.

3. Routine habits and activities
Daily and weekly routine, for example, 'He goes to work at 8 o'clock', 'She goes skating every Thursday', 'He gets up at 6 o'clock and makes the fire'.

4. Actual incidents
Statements about specific actions, things done and said, events the other person has been involved in or the places he has visited, for example, 'He went to France for his holidays', 'He painted his house last week', 'She told me that she dislikes a woman who talks behind people's backs'.

5. Possessions
The person's property and possessions, for example, 'He has a pet rabbit', 'He owns a car', 'He has a new bicycle'.

II. Contemporary and Historical Circumstances
6. Life history
Historical circumstances, childhood experiences, background, origin, for example, 'He was brought up wrong', 'He comes from Leeds', 'He was not well educated'.

7. Contemporary social circumstances
Contemporary constraints and opportunities in his environment, pressures exerted on him, for example, 'His father won't let him play out', 'His parents are very rich', 'His mother won't let him climb trees', 'He always has lots of money to spend'.

8. Physical condition
Health, physical fitness and strength, for example, 'He is strong', 'He is often ill', 'He has a bad leg'.

III. Personal Characteristics and Behavioural Consistencies
9. General personality attributes
Personality traits and temperament, for example, 'friendly', 'concerned', 'selfish', 'kind', 'moody', 'bad tempered', 'gentle', 'changeable'.

10. Specific behavioural consistencies
General habits, characteristic reactions to others of a specific nature, reaction to blame, stress, failure, and so on, for example, 'grumbles', 'can't take a joke', 'shouts', 'plays nice', 'groans a lot'.

11. Motivation and arousal
Aspirations, aims, ambitions, wants, needs, goal directedness of behaviour, motivation in tasks undertaken, for example, 'His ambition is to go to grammar school', 'He wants to go in the Army'.

12. Orientation
Expectations, wishes, fears, self reproaches; how the person sees the situation; how he feels things are going; feelings of hope, anxiety, neglect; for example, 'She is always crying because she is fat', 'She does not like war and gets very afraid when anyone mentions it', 'He is only of average ability but that does not worry him'.

13. Expressive behaviour
Specific personal habits and mannerisms, characteristic gait, speech characteristics, for example, 'He twitches his moustache', 'Walks funny', 'He has a funny voice', 'She speaks with a squeaky voice'.

-85-
### IV. Aptitudes and Achievements

14. Intellectual aptitudes and abilities

Mental skills and intellectual capacity, scholastic ability, scholastic achievements and failures, for example, 'intelligent', 'clever', 'good at sums'.

15. Achievements and skills

Physical skills, successes, failures, disabilities, for example, 'He is a good footballer', 'She is good at cooking', 'She wins a lot of house points'.

### V. Interests and Preferences

16. Preferences and aversions

Likes and dislikes (both persons and things), for example, 'He likes sweets', 'He likes watching television', 'He does not like school', 'He is very fond of ice-cream'.

17. Interests and hobbies

General interests and hobbies, including play activities, for example, 'His hobby is collecting stamps', 'He enjoys walks in the country', 'He is very interested in ships'.

### VI. Attitudes and Beliefs

18. Beliefs, attitudes and values

Standards, values and ideals that the person accepts and conforms to, for example, 'She is very religious', 'He does not believe in war'.

19. Stimulus person's opinions and attitudes towards himself

The person's self-evaluation and opinion of himself, for example, 'She thinks she is very beautiful', 'He thinks he is better than everyone else', 'She thinks she's a hard knock'.

### VII. Evaluations

20. Evaluations

The subject's evaluations of the stimulus person. Social desirability or undesirability of behaviour, manners, outright evaluations, including abusive statements, for example, 'good', 'nice', 'nasty', 'horrible', 'rude', 'cheeky', 'polite', 'clean', 'dirty'.

### VIII. Social Factors

21. Social roles

Group and organizational membership, occupational role, for example, 'He is a teacher', 'She is a member of the tennis club', 'He is a cub'.

22. Reputation

What people in general think of the person, for example, 'He is popular', 'Other people like him'.

23. Friendships and playmates

The person's friends, acquaintances and playmates, including details of the number of friends he has, for example, 'He plays with . . .', 'Her best friend is . . .', 'He has lots of friends'.

24. Effect upon, and relations with, others

The consequences and effects the person's behaviour has upon other people and the consequences for himself, for example, 'He makes us miss our playtime', 'At parties he just mopes around with a face like a "wet Eelio" and puts a big black cloud over everybody', 'He makes people feel embarrassed', 'She makes everyone feel happy'.

-86-
APPENDIX H (continued)

25. Other people's behaviour towards the stimulus person

The specific reactions of other people to the person described, for example, 'Karen dislikes her', 'Other people hit him', 'Cathy said she did not like her', 'My brother says he is not too bad as a friend'.

(Note the distinction between this category and category 22—reputation. This category refers either to a single person's response towards the stimulus person or to the specific reactions of some other people. Category 22 refers to the overall opinion and nonspecific behaviour of people in general in relation to the stimulus person.)

26. Relations with the opposite sex

Attitudes towards and relations with opposite sex, for example, 'Her boyfriend is . . .', 'He is not interested in girls', 'He is very sexy'.

IX. Subject-Other Relations

27. Mutual interaction

Interactions between the subject and the stimulus person; the things they do or have done together, length of acquaintance, frequency of interaction, for example, 'I see her at the weekend', 'We play together after school', 'He knows our family well', 'I have always known him'.

28. Subject's opinion of, and behaviour towards, the stimulus person

General pronouncements about the person, for example, 'I like him', 'He is my best friend'.

X. Comparison against Standards

29. Comparison with self

Comparisons between the person and the subject, for example, 'He is smaller than me', 'He is not as clever as me'.

30. Comparison with others

Comparisons between the person and other people or an ideal, for example, 'He is the tallest in the class', 'He is more clever than his sister'.

XI. Family and Kinship

31. Family and kinship

The person's family and relations, the number of children he has, descriptions of a relative, for example, 'He has three children', 'His son is called Peter', 'His wife is horrible', 'She has three brothers', 'Her brother is in my class'.

XII. Illustration, Corroboration and Explanation

32. Collateral facts and ideas

Specific statements in support of a previous assertion, illustrations of personal qualities, explanations of behaviour, for example, '[She is quite lonely] because her daughter is now in London and she is alone', '[She treats her best friend very badly] when she has a party she doesn't invite her', '[If he sees something he likes he takes it] for example, if he feels like a drink he would take a bottle of milk from anyone's front door and think nothing of it'.

XIII. Residue

33. Irrelevant and unclassifiable facts and ideas

Irrelevant information—usually about someone unrelated to the other—or statements which cannot be placed in any other category.
APPENDIX I

Categories Considered to be Abstract Descriptors

Personality traits, such as generous, kind or helpful.

General habits, for example, hits people, always tells us off.

Motives, needs and values, for example, wants to succeed in life.

Attitude and orientation, for example, very religious.
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