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Children's attitudes toward the elderly

by

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INTRODUCTION

Almost 20 years ago, Duncan (1963) noted that society had only recently become concerned with the problems of aging and very little with aging as a social problem. The impetus for this increased interest in the elderly may be attributed to the fact that social, medical, and technical advances are permitting more and more people to live past retirement age than was true even 50 years ago. In fact, the elderly today represent a considerable segment of the population of the United States (approximately one out of every ten Americans was 65 years or older in 1976) and projections indicate that if the present population trend is maintained, the percentage of elderly Americans will continue to increase (U.S. Bureau of the Census, 1976). In the past 20 years, considerable research has been performed on attitudes toward the aged (McTavish, 1971). However, rather than successfully defining the issue of society's attitudes toward the aged, the plethora of past research has only confirmed how little social scientists know about the attitudes of various publics toward the elderly.

Significance of Problem

The bulk of the research performed in the area of attitudes toward the elderly has provided evidence supporting the
proposition of generally unfavorable attitudes toward aging and the elderly by society (e.g., Aaronson, 1966; Kogan & Shelton, 1962; Naus, 1973; Seefeldt, Jantz, Galper, & Serock, 1977). The studies, for the most part, have addressed the question of how adults (usually college students) have stereotyped the aged, although some research has been performed on the attitudes of other age groups (such as adolescents) toward the elderly (e.g., Ivester & King, 1977; Thomas & Yamamoto, 1975). As a result, very little is known about the antecedents of adult attitudes toward the elderly or when developmentally such stereotypic notions about the aged are established. There is evidence that attitudes toward the aged begin during childhood (e.g., Hickey & Kalish, 1968; Weinberger, 1979) and become progressively more negative with each older age group (Tuckman, Lorge, & Spooner, 1953).

The study of children's attitudes toward the elderly is an important field of inquiry in its own right. However, it assumes added significance among those who believe that facts, values, attitudes, and beliefs obtained in childhood and early adolescence continue to exert an influence throughout the life cycle. Consequently, there appears to be a need for continued investigations about children's concepts about the elderly as well as an examination of the possible sources that may produce such concepts. This study will investigate
the attitudes toward the elderly held by kindergarten children.

Theoretical Framework

Of the three major periods of the lifespan—childhood, adulthood, and senescence—Collette-Pratt (1976) noted that only senescence has been rather consistently devalued and viewed negatively by American society. Gerontologists have formulated a variety of possible explanations for these negative attitudes toward old age. However, the three most commonly suggested reasons for the devaluation of old age appear to be that:

1. negative attitudes toward old age reflect basically negative feelings toward low socioeconomic status, poor health, and loneliness associated with old age (Bennett & Eckman, 1973);

2. the elderly, as a group, have more difficulty or less of an opportunity to reflect the American values of productivity, achievement, and independence (Collette-Pratt, 1976); and

3. the age stratification that divides the American society may foster in younger people stereotypes and misinformation about the elderly. While the research results have been inconsistent (McTavish,
1971), the age stratification concept has remained a popular explanation for continuing negative attitudes toward the elderly (Collette-Pratt, 1976).

Of interest is the fact that the stereotypic behavior patterns younger people possess toward the elderly appear to be associated with the socialization process (Aaronson, 1966). In its broadest conception, socialization has been defined by Inkeles (1969) as referring to the total collection of an individual's past experiences which may be expected to, in someway, influence or shape future social behavior. The socialization process then may be described as the system whereby an individual acquires the expertise to successfully fulfill the roles society has assigned him to play at a specific stage in life. Aaronson (1966) has described the socialization process for the elderly as one of "constriction" which coincides with a "loss of energy and reduced activity level" (p. 461). As a result, socialization appears to be continually reinforcing a progressively more restricted range of behaviors for the elderly.

In American society, a major part of the older individual's task is to learn to renounce previously held positions (Cumming & Henry, 1961; Inkeles, 1969). The elderly, according to Inkeles, must not only adjust to actual changes in physical abilities, but also to changes in the expectations
others possess toward one of their age or status in life. During senescence, as was the case during adolescence, Inkeles believes one's peers become an essential socializing agent. However, unlike the adolescent who turned toward his parents to provide role model information, the aged parent now turns toward his own children and other juniors to determine his designated status. However, socialization for later life roles does not imply that all learning for these roles need occur during the period of old age. Riley, Foner, Hess, and Toby (1969) have discussed the importance of anticipatory socialization or an individual's learning in the present, the behaviors necessary to execute an advanced or future role.

Social learning theory holds that the likelihood of newly learned behaviors being later displayed in the child's personality is governed chiefly by schedules of reinforcement and punishment (Thomas, 1979). The child uses the information gained from observing the consequences of the behavior in question to guide decisions about when one response will be more appropriate than another to fulfill needs and attain
rewards. Gewirtz (1969) has argued that early life experiences may considerably influence the development of later behavior systems. Certain later behavior systems would appear to be more effectively established when supported by behavior systems that usually are learned early in life and that subsequently can become the elements of Stimulus-Response chains, including those behaviors directed at people (Gewirtz, 1969). The importance of early behavior systems on later behavior is supported by Peters (1971) claim that the self-perceptions of old people are formed as responses to cultural or social definitions of age. These definitions of what an elderly person should be appear to be learned at a very early age.

Unfortunately, child-rearing researchers have, for the most part, tended to concern themselves more with problems in the mastery of basic skills (e.g., toilet training, control of aggression) than in studying the acquisition of skills and attitudes relevant to social functioning (Inkeles, 1969). One specific area which reflects a void is in the area of children's attitudes toward the elderly. Hickey and Kalish (1968) have found that children as young as eight-years-old perceive age-related differences between distinctly different adult age groups and they have suggested that attitudes toward the elderly may actually develop even earlier in a child's life. However, whether a person's stereotype of the
elderly originates due to the effect of the media, a reflection of parental attitudes, or is caused by some other specific influence, has not been addressed. Nor has the research adequately examined the possibility that the behavior system associated with attitudes toward the elderly is established even earlier in a child's life, as Hickey and Kalish (1968) have suggested.

In light of social learning theory's argument advocating the importance of early experience upon an individual's attitudes toward social norms, the present study will examine the nature of the attitudes toward the elderly held by kindergarten children and will test whether some of the child's attitudes toward the elderly are compatible with those held by the child's parents. Since the bulk of the research on attitudes toward the elderly has been conducted with college students and adult samples, it also would be of interest to see if the discovered behavior system of adults toward the elderly has already been established in the kindergarten child. Supportive findings on this point would not only indicate that attitudes toward the elderly do emerge rather early in life, but would also reinforce the importance of early experience and early behavior systems.
Statement of Problem

The purpose of this study is to investigate the attitudes of kindergarten children toward personalized and nonpersonalized elderly. This study will compare the child's attitudes toward nonpersonalized elderly with the attitudes of the child's parents toward nonpersonalized elderly. Comparison of responses include: the child's attitudes toward personalized with nonpersonalized elderly; mother's attitudes toward nonpersonalized elderly with those of her child; and father's attitudes toward nonpersonalized elderly with those of his child. In addition, the amount of contact the child has with the personalized elderly, the age of the child, the sex of the child, and the sex of parent, as possibly related to attitudes toward the elderly, will be investigated.

Children's attitudes will be assessed by their recorded verbal and nonverbal responses to the Children's Attitudes Toward the Elderly, CATE (Jantz, Seefeldt, Galper, & Serock, 1976) which was revised for the present study. Parents' attitudes will be assessed through their written responses to a 10-item semantic differential checklist taken from the revised CATE and focused on nonpersonalized elderly.
Operational definitions

Kindergarten child: This term refers to any male or female child enrolled in a formal kindergarten program and who lives in a home with a natural or adoptive mother and father.

Personalized elderly: This term refers to either a male or female individual approximately 65 years of age or older with whom the kindergarten child has either daily, weekly, or monthly contact.

Nonpersonalized elderly: This term refers to the class of people approximately 65 years of age or older and not to a specific person.

Elderly contact: This term is operationally defined as any instance of direct, personal, "face-to-face" contact perceived by the parents as occurring between their kindergarten child and an individual approximately 65 years of age or older.

Null hypotheses

The specific null hypotheses to be tested are:

1. There is no relationship between children's sex and their attitudes toward elderly persons.
2. There is no relationship between parents' sex and their attitudes toward elderly persons.
3. There is no difference between the mean attitudinal responses of mothers' and fathers' toward elderly persons.

4. There is no relationship between children's age and their attitudes toward elderly persons.

5. There is no relationship between the attitudes of children and their parents toward nonpersonalized elderly.

6. There is no difference between the mean attitudinal responses of children and their parents toward nonpersonalized elderly.

7. There is no relationship between the attitudes of children toward personalized and nonpersonalized elderly.

8. There is no difference between the mean attitudinal responses of children toward personalized and nonpersonalized elderly.

9. There is no relationship between the amount of contact a child has with a personalized elderly person and their attitudes toward personalized and nonpersonalized elderly.
REVIEW OF LITERATURE

In the past several decades, considerable research has been performed on attitudes toward the aged. The bulk of the research in the area of attitudes toward the elderly may be characterized by the use of college students and adults as subjects and the discovery of a generally unfavorable attitude held toward the elderly by society (McTavish, 1971). During the late 1960s, a shift in emphasis occurred in the study of attitudes toward the elderly. The focus of interest changed to a study of the child's, rather than the adult's, attitudes toward the elderly. A recapitulation of the major research findings will demonstrate why this shift in subject emphasis occurred and why researchers interested in attitudes toward the elderly have continued to study children.

Adults' Attitudes toward the Elderly

One of the pioneering teams in the area of people's attitudes toward the elderly was that of Tuckman and Lorge who developed and tested the often used and referred to Tuckman-Lorge Old People Questionnaire. While other researchers earlier had addressed the question of attitudes toward the elderly, McTavish (1971) has credited Tuckman and Lorge's instrument-development study on attitudes toward old people as pro-
viding the "main impetus in the field, and the earliest source usually cited by gerontologists in this area" (p. 90).

The study of people's attitudes toward the aged, it may be said, began with Tuckman and Lorge (1953a) performing a study the purpose of which was to investigate the attitudes of a young adult group of graduate students toward old age. The subjects' attitudes were measured by their responses to a questionnaire consisting of beliefs, misconceptions and stereotypes about the adjustment and personality make-up of old people. The questionnaire they developed consisted of 137 statements classified into 13 categories. Material for the statements was obtained through fairly unstructured interviews with 15 adults (ages 21 to 65 years); by discussions with social workers and directors of institutions for the aged; by reading case records of older age clients; and by a review of the literature.

Tuckman and Lorge (1953a) administered their questionnaire to 147 graduate students (ages 20 to 51 years). The results suggested that there was substantial acceptance of misconceptions and stereotypes about old people by the graduate students. It also was apparent that responses of the group were based on a limited knowledge of the aging process and that information was obtained through observations of parents, relatives, and older acquaintances, or through observa-
tion of their own aging. Tuckman and Lorge thus concluded that these stereotypic responses were a reflection of the cultural expectations regarding the activities, personality characteristics, and adjustment of older people.

The purpose of several subsequent studies (Tuckman & Lorge 1953b; 1953c) was to determine the relationship between responses to the question about when old age began and the number of stereotypes held about old people. Fifty undergraduate students (mean age = 19.5 years), 304 graduate students (mean age = 31.7 years), 100 middle-age subjects (mean age = 50.3 years), and 88 older age individuals (mean age = 74.8 years) completed the Tuckman-Lorge Questionnaire. Tuckman and Lorge (1953c) interpreted their data analysis as indicating three major results 1) respondents who believed old age to begin at a specified chronologic age tended to subscribe to a greater number of stereotypes about old people than respondents who did not; 2) the number of stereotypes about old people tended to decrease as the age specified for the beginning of old age increased; and 3) respondents whose own age was closer to the age they specified as the beginning of old age subscribed more to the stereotypes about old people than respondents whose own age was further removed.

Using their own questionnaire, Tuckman and Lorge, in collaboration with Spooner (Tuckman, Lorge, & Spooner, 1953), at-
tempted to determine the relationship between the beliefs of parents and the beliefs of their college-age children toward old people and the older worker using the Old People Questionnaire and an Older Worker Questionnaire. The subjects were 50 sophomore college students (ages 18 to 42 years) and both their parents (ages 36 to 80 years). The data from the study indicated that fathers of college students tended to subscribe more to the stereotypic beliefs about old people than the mothers of the students; mothers of college students tended to subscribe more to the stereotypes than the students; and male undergraduates subscribed to more stereotypic beliefs than female undergraduates.

Tuckman et al. observed from the study described above that the correlations between responses to items on the Old People Questionnaire between fathers and mothers \( (r = .49, p < .01) \), fathers and children \( (r = .56, p < .01) \), mothers and children \( (r = .43, p < .01) \), and children and both parents \( (r = .57, p < .01) \) were all highly significant. Tuckman et al. interpreted the results as confirming previous findings of a substantial acceptance of the cultural stereotypes about aging and indicated that the home environment contributed to the similarity in attitudes between parents and between parents and their children. However, parents did subscribe more to the beliefs, misconceptions, and stereotypes
about old people than did their children.

Several years later, Tuckman and Lorge (1958) compared the questionnaire responses of 92 workers with the elderly (ages 25 to 79 years, mean age = 56 years) who had attended a lecture series (lecture group) with the previously recorded responses of undergraduate and/or graduate students (Tuckman & Lorge, 1953c). Tuckman and Lorge (1958) expected a difference in attitude toward aging and the aged between the two groups on the basis of the lecture group having more direct contact with the aged. Their results confirmed the anticipated difference between the groups. The lecture group subjects tended not to accept the stereotypes about the elderly to the same degree that undergraduates did, although the lecture group did believe more in stereotypes than did the graduate students. Tuckman and Lorge (1958) concluded that individuals who have had more direct contact with a variety of old people tend to be somewhat less negative in their attitudes toward aging than those whose acquaintance was more limited and constrained.

In a related study, Drake (1957) sought to test the hypothesis that the acceptance of stereotyped ideas held by college students about old people will not vary according to the closeness of physical contact, the frequency of contact, and the intimacy of contact college students have with old people.
Drake tested this hypothesis by administering 16 stereotyped statements, similar to the Tuckman-Lorge Questionnaire, to 397 college students. On the basis of his data, Drake concluded that in terms of living arrangements, intimacy, and frequency of contact the students had with old people, the opinions held toward old people by students did not vary to any significant extent (statistics not reported). However, students who had never lived in a home with an old person, but had frequent close contacts with older people, did tend to have a more favorable overall conception of the elderly.

Bekker and Taylor (1966) hypothesized that when grandparent groups, matched for age, were compared, there would be significant differences in attitude between students who had living great-grandparents and students with only living grandparents. One-hundred undergraduate students completed a modified (by Axelrod & Eisdorfer, 1961) Tuckman-Lorge Questionnaire in the Bekker and Taylor study. Fifty subjects represented a four-generation group while the remaining 50 subjects came from a three-generation group. Comparison of responses across the two groups supported the hypothesis. The difference in total mean response between the four-generation and three-generation group was highly significant (t = 2.25, p < .01). Bekker and Taylor suggested that the four-generation group of subjects may attribute fewer negative charac-
characteristics to their grandparents due to their expanded range of experiences.

Older Children's Attitudes toward the Elderly

Although innumerable studies have been published on the attitudes toward the elderly of college student samples (e.g., Aaronson, 1966; Axelrod & Eisdorfer, 1961) and community samples (e.g., Kogan, 1961) very limited exploration has been undertaken in regard to the feelings of young children toward the elderly. However, a study was conducted to investigate the reactions of children toward the elderly (Hickey, Hickey, & Kalish, 1968). Hickey et al. asked 208 third graders (median age = 8 years) to write an essay about an old person who was operationally defined as "like your grandparents". A response was considered anything that the child noted as characteristic of an old person. There was no limit to the number of possible responses on any one paper. From their study, Hickey et al. found that in the social category, the children perceived the elderly as kind or friendly three times as often as mean or unfriendly. Old people were also seen as being lonely, bored, inactive, and possessed of much leisure time. In the physical category, the characteristics most commonly perceived by the children were in terms of the older person having ambulatory differences from young people and in being
generally feeble. Hickey et al. concluded that eight-year-old children have already begun to develop concepts of what old age is, and attitudes toward old people.

Two of the authors from the above study (Hickey & Kalish, 1968) went on to investigate some of the attitudes and perceptions which 8- to 20-year-old subjects have toward adults and the elderly. A 20-item written questionnaire based on the paragraphs written by the eight-year-old subjects studied previously (Hickey et al., 1968) and on taped interviews with other children was developed to measure young peoples attitudes toward older persons. To construct their questionnaire, Hickey and Kalish first established two classes of reactions to adults by children. These reactions had been noted by the children with considerably greater frequency than other social characteristics. One reaction implied pro or con feelings toward adults, and questionnaire items based upon it were considered to form an Evaluative scale. The other reaction seemed primarily to show an awareness of age related changes and questionnaire items based upon it were termed the Descriptive scale. Hickey and Kalish administered their questionnaire to 78 third graders, 83 junior high school students, 102 high school students, and 72 college undergraduates. The items derived from the two classes of reactions were repeated in random order in the questionnaire, each time referring to a
different age groups of adults: 25-, 45-, 65-, and 85-years-old. Two of the most important findings which emerged from the Hickey and Kalish data were 1) that subjects of all ages perceived age-related differences between distinctly differ­ent adult age groups, and 2) that the negative concept of the elderly may actually develop very early in a child's life.

In a related research study, performed several years ear­lier, Kastenbaum and Durkee (1964) investigated the attitudes of junior and senior high school students (68 females, 55 males) toward the elderly. Subjects were administered the Important Years (IY) and Age-Appropriate Attitudes Technique, Part I (AAAT) instruments. The former requests the subject to select from the total lifespan—past, present, and future—the three years which he considers most important and indicate the reasons for his choice. The latter presents a set of six brief character sketches and the subject's task is to estimate the age of the character, the reason for making that estimate, and what he would say to each character after be­coming familiar with the character. Kastenbaum and Durkee found that, for the adolescent, old age is "risky, unpleasant, and without significant positive values" (p. 244). There ex­isted an intense "now-orientation" for youth which tended to block any subjective extension into the distant past or far­off future. However, whether or not feelings similar to the
adolescents studied prevailed among younger children was not addressed by Kastenbaum and Durkee.

Another study which utilized a student population of 400 high school and college youth was designed and completed by Lane (1964). Based upon the belief that an inquiry into the attitudes held by youth toward aged persons would help clarify perceptions concerning the aged, she administered a 67-item adaptation of the Tuckman-Lorge Questionnaire. An analysis of the responses of the students indicated that their attitudes were generally favorable although relatively few perceived the aged in such a way as to imply very favorable attitudes. On the other hand, none of the subjects had attitude scores in the very unfavorable category. The implication of the apparent "neutralism" of youth toward the elderly, Lane interpreted as suggesting the aged person to be existing in a "climate of tolerance" with youth, rather than one of acceptance.

More recently, Bear and Guy (1976) tested a hypothesis to see whether positive attitudes toward the elderly prevailed among high school students. They developed a six-point bipolar likert-type scale of 44 statements, 37 of which were taken from the Tuckman-Lorge Questionnaire on attitudes toward the elderly. Bear and Guy's sample consisted of 163 students: 78 undergraduate students, 40 rural high school
students, 23 urban high school students, and 22 rural junior high school students. The scale was administered to each subject during class. Bear and Guy found that junior high, high school, and college students all responded with positive attitudes. An ANOVA showed that age or education level of the respondents was significant in assessing attitudes toward elderly persons; junior high school students responded somewhat more favorably than high school students or college students; and high school students responded the least favorably. Bear and Guy's findings thus supported several prior studies (Bell & Stanfield, 1973; Thorson, Whatley, & Hancock, 1974).

Thomas and Yamamoto (1975) attempted to explore further the attitudes which students of different ages (in grades 5, 7, 9, and 11) have toward young, middle-age, and old persons. Thomas and Yamamoto administered two data gathering devices to the subjects in their respective classrooms. The first device was a story-writing task which involved three newspaper photographs. The children were instructed to estimate the person's age in the photograph and write a story about each one in the child's preferred order. The student's age estimates showed judgmental accuracy and were remarkably uniform in both central tendency and variation. The overall order of choice was young person, old person, and middle-age
The second data collecting device was scores from a seven-point bi-polar semantic differential (which were, following data collection, subjected to a three-way analysis of variance). The results of the analysis indicated a considerably more positive overall picture of adults by older children than had been found previously. Thomas and Yamamoto concluded from their data that these children did not share the allegedly general, negative attitude toward old age that one might expect.

Ivester and King (1977) also investigated the attitudes of adolescents toward the aged. Subjects were 270 ninth graders and 142 twelfth graders of predominantly white, middle-class background from a rural high school. Kogan's Attitudes Toward Old People (OP) scale was chosen as the test instrument because of its demonstrated reliability and validity. An examination of the raw score data from the OP scale revealed that the attitudes of the subjects toward old people tended to be more positive than negative. Ivester and King's finding was thus consistent with Kogan's (1961) original research with the OP scale with college students.

Ivester and King performed a t-test on the differences between the mean scores of the 12th graders and the 9th graders. The difference between age groups proved to be non-significant ($t = 0.25, p < .50$), which was consistent with
the findings of Hickey and Kalish (1968) who found no significant differences in how 8-, 12-, 15-, and 19-year-old persons viewed the aged. Ivester and King also performed an F-test of the differences on the OP scale classified according to the frequency of contacts with paternal and maternal grandparents. The F-test revealed no significant differences among subjects who visited their grandparents weekly, monthly, and yearly. This finding of no difference in elderly contact is contrary to what Rosencranz and McNevin (1969) found but is consistent with the results of Drake's (1957) study. Finally, Ivester and King looked at sex as a variable in the adolescent's attitudes toward the elderly. A t-test of the mean scores on the OP scale for the male and female subjects indicated that the difference was not significant. In general, Ivester and King concluded that the majority of adolescents in their study demonstrated a positive attitude toward the aged.

Younger Children's Attitudes toward the Elderly

Britton and Britton (1969a) investigated the extent to which preschool children distinguished between children and adults on the basis of age. Fifty preschool children (ages 3.0 to 5.9 years, mean age = 4.3 years) served as subjects. For the study, a series of five male and five female figures
representing a child, adolescent, young adult, middle-aged adult, and older adult were constructed using a minimal number of visual cues. The results showed that the lower the age represented in the pictures, the more likely the child was to place it in the correct chronological order. Similarly, there were no significant differences by age of responding children on the correct ordering of pictures representing the two oldest ages. Finally, Britton and Britton (1969a) found that a moderate relationship (statistics not given) between the age of the child and his ability to discriminate among the pictures existed. Generally, the greater the child's age the less difference there was between the child and adult discriminations.

In a related study, Britton and Britton (1970) examined the perceptions young people had of persons of varying ages and the characteristics they assigned to children, adolescents, young adults, middle-aged adults, and older adults. The subjects were 2nd, 4th, 6th, 8th, 10th, and 12th grade students from two Pennsylvania schools (N = 695) as well as 405 university students. Projective pictures representing each age category were used with sociometric-type questions. Britton and Britton (1970) found that male and female subjects differed little in their response to the pictures. The
elementary school children tended to distribute their responses among the five alternatives while older subjects tended to concentrate their choices. Often, the subjects saw young adults as healthy and best looking, and the older person as most rigid.

Seefeldt, Jantz, Galper, and Serock (1977) used drawings of one man at four different stages of the life cycle, 20-, 40-, 60-, and 80-years-old, to explore children's attitudes toward the elderly. Various researchers had previously used pictures, drawings, and photographs as a means of eliciting attitudinal responses from samples of adults (e.g., Lawrence, 1974) and older children (e.g., Thomas & Yamamoto, 1975). Subjects were 180 children, 20 at each of nine levels, preschool through sixth grade, from a school system near Washington, D.C.. The testing was performed individually in a structured interview situation. Seefeldt et al. found significant differences between the ability of the nursery-kindergarten group and the first through sixth grade groups to correctly identify the picture of the oldest man, with the older children performing better than the younger ones. Generally, when asked why they picked the man they did as the oldest, children reported doing so in the basis of physical-descriptive cues. When asked how they would feel when they were this old (pointing to the picture of the 80-year-old
man), the majority of children (108 of the 180) gave responses Seefeldt et al. rated as negative. The younger children (nursery through kindergarten and first through fourth grades) gave significantly more negative responses than did children in the fifth and sixth grades.

Seefeldt et al. interpreted the observed age-related differences in the children's responding as supporting a cognitive-developmental sequence in regard to the concept of children's attitudes toward the elderly. Based on the children's responses, Seefeldt et al. concluded that children's reported negative and stereotypic attitudes toward old age and the elderly appear to be influenced most by the physical characteristics of the elderly. Besides this age-related difference, Seefeldt et al. also reported a "housing effect". Children who lived in housing considered rural or on farms were found to be more negative in their statements about perception of growing old themselves than those children living in housing categorized as town and development.

Weinberger (1979) sought to examine children's impressions of aging and the aged by incorporating some of the features of a previous investigator (Britton & Britton, 1969a). Subjects were 106 boys and girls between five and
eight years of age. Weinberger developed four sets of photos (two sets contained all male photos and two sets contained all female photos). Each set contained a full-face photo of a preschooler, elementary school-age child, young adult, middle-aged adult, and an elderly adult. Subjects were asked to rank order one of the four sets of photos by responding to a series of questions. To test the hypothesis of a negative bias against the elderly, a comparison was made between the number of times the elderly were assigned the first (most-favored) rank and the fifth (least-favored) rank and the number that would be expected by chance (i.e., in the absence of any systematic bias, the elderly should be assigned each rank with a 20% frequency). Weinberger found that 1) children were better able to correctly identify the photo of the preschooler as the youngest and the photo of the elementary school-age child as next-youngest, than they were at ordering the two older pictures; 2) children provided significantly lower (statistics not given) age estimates of the middle-aged and elderly person when compared to the age estimates assigned by adults; and 3) children tended to view the elderly as least happy, to have fewer friends, as less intelligent, and as being less healthy and attractive as the other age groups. Consequently, this last point may be interpreted as indicating a negative view of the elderly by the children in Weinberger's study.
Personalized versus Nonpersonalized Attitudes toward the elderly

The trend toward a negative view of the elderly in Weinberger's (1979) study is contradictory to that reported earlier by Thomas and Yamamoto (1975) for older children. Weinberger has argued that by requiring the children to produce stories about old people, Thomas and Yamamoto had created a situation whereby the children were formulating stories about personalized old people and not about old people in general and it was this influence that was responsible for Thomas and Yamamoto finding a more positive attitude toward the elderly. Weinberger's hypothesis was supported by Crockett, Press, and Osterkamp's (1979) finding that college students consistently viewed specific older persons as exceptional, even while they retained negative stereotypes of older people in general. However, in both studies reporting a more favorable attitude toward the personalized elderly (Crockett et al., Thomas & Yamamoto) older children and adults served as subjects.

In an earlier study, Weinberger and Millhan (1975) investigated the nature of the expressed attitudes of college students toward the elderly. Subjects were 100 undergraduates (56 males, 44 females; age range = 17- to 22-years). The subjects read two autobiographies, one of a 25-year-old...
and the other of a 70-year-old. Weinberger and Millhan found that their subjects tended to express less favorable evaluations for a "representative" 70-year-old than for a particular individual (who was personalized in the autobiography and for whom a picture accompanied the autobiographic sketch). Weinberger and Millhan concluded that the expression of belief statements toward a group was a separate response system from judgments of a particular member of that group. In the case of the elderly, there was a definite conflict between the college students' negative attitudes toward the group of older persons and the students' positive response tendencies toward a personalized older person.

The effect of a "personalized" old person versus an old person "in general" raises the question about the effects of contact with the elderly. Specifically, for a young child, this may involve contact with the grandparents. Rosencranz and McNevin (1969) have noted that some investigators (e.g., Drake, 1957) had found little or no relationship between college students contact with the elderly and their stereotypic attitudes toward the elderly. Most of these studies had utilized the Tuckman-Lorge Questionnaire of stereotypic attitudes toward the aged. Rosencranz and McNevin believed that the Tuckman-Lorge instrument might be criticized on the basis of its "nonunidimensionality as well as its reliance upon many
items which have not been shown empirically unfounded" (p. 57).

In response to their own criticism, Rosencranz and McNevin (1969) constructed a 32-item semantic differential scale. Two-hundred and eighty-seven undergraduates served as subjects for a test of the scale. The subjects were asked to rate the adjective pairs for each of three different age categories: 20-30 years, 40-50 years, and 70-85 years. Respondents who had close grandparent contact (defined by daily or weekly visits with at least one grandparent) judged the aged more favorably on each of the three dimensions (Instrumental-Ineffective, Autonomous-Dependent, and Acceptability-Unacceptability) than respondents having little or no contact with grandparents. Respondents who had meaningful associational contact with at least one older person exhibited more favorable attitudes toward the older male than respondents who did not. The quality of contacts with older persons, Rosencranz and McNevin found, also seemed to influence respondents judgments.

In light of Rosencranz and McNevin's (1969) findings, a study by Kahana and Kahana (1970) assumes greater importance. Kahana and Kahana investigated grandchildren's interaction patterns, emotional involvement with, and attitudes toward their grandparents. Subjects were 30 children in each of the age groups of 5-, 8-, and 12-years-old (N = 90) who were com-
pared in terms of perceptions of grandmothers versus grandfathers and maternal versus paternal grandparents. Kahana and Kahana reported differences in attitudes based on grandparents' place in the kinship for children of different ages and for both sexes. Frequency of reported interaction was significantly greater (statistics not given) with maternal grandparents than with paternal grandparents, even when the availability of contact was held constant. In general, children tended to be most familiar with maternal grandparents, especially grandmothers, and least familiar with paternal grandparents, especially grandfathers. Therefore, reflecting upon the last two studies (Kahana & Kahana, 1970; Rosencranz & McNevin, 1969) it would appear that maternal grandparents play a major role in influencing their grandchildren's attitudes toward old people.

Marcoen (1979) investigated the characteristics and quality of the image children have of aged persons in general and of their grandparents. In class and during two consecutive sessions of about 20 minutes, 114 male and female 2nd-, 4th-, and 6th-graders from two Catholic schools in Antwerp drew successively an aged man and woman and their grandfather and grandmother. These four figures were examined and compared with regard to the richness of the drawings (the number of characteristics drawn) and the number of deficit and old age
life style characteristics (e.g., baldness, blindness, cane, hearing-aid). An analysis of variance was performed on the data in order to examine the influence and interaction of the two between-subject variables—sex and age of child—and the two within-subject variables—sex and kinship of stimulus person.

Marcoen's (1979) analysis revealed that, in relation to the richness of the drawings, sex of child, age of child, the kinship of figure, and a sex of child by sex of stimulus person interaction were all highly significant. In regards to the proportion of deficit characteristics, there was a principal influence of sex of child, age of child, kinship of stimulus person, and sex of stimulus person which also were all highly significant. Finally, the kinship of stimulus person and the sex of stimulus person were significant (for the old age and life style characteristics). From his analysis, Marcoen concluded that 1) the basis of an old age stereotype was already present at the elementary school age. However, the children's image of aged persons was not entirely negative; and 2) the image which 7- to 11-year-old children have formed of aged people was much more differentiated.
than was previously assumed. The children in the study clearly differentiated between aged persons and their grandparents. Marcoen attributed this difference in differentiation to the frequent contact the child had with the grandparents.

An observation from the above study introduces the next section of this review. Marcoen (1979) observed that

When shaping all these characteristics into a robot picture, one obtained an image which corresponds to the types of old persons as they are found in children's books, strips, or sets of toys. (p. 100)

In light of this finding, it would appear relevant to examine the depiction of the elderly in the various media.

The Elderly in Children's and Adolescent's Literature

Blue (1978) sought to analyze how the aging have been portrayed in children's contemporary realistic fiction. A master book list of 173 realistic fiction books known to contain at least one aging character was developed by Blue in consultation with librarians of the Children's Department of the Cleveland Library. From these 173 books, a random sample of 125 books was selected. Each of the 125 books was read in its entirety and all passages were analyzed for reference to any of eight criterion categories (e.g., demographic portrayals, personality traits, activities). From her analysis,
Blue concluded that children's literature tended to indicate a general humanistic concern for understanding the elderly as individuals in diverse styles of life and circumstances. Therefore, the portrayals did not tend to support the contentions that society's attitude toward the aging as portrayed in children's literature was predominantly one of negativism.

A study similar to Blue's was performed in order to analyze the content of older people in adolescent literature. Peterson and Karnes (1976) selected their sample for review from 53 books which had been awarded the John Newbery Medal (thus, these books were selected by the American Library Association as representing the outstanding piece of adolescent literature for that year). Since the Newbery Medal winning books often were promoted by librarians and teachers, Peterson and Karnes assumed that these books were more widely read than other books and might be expected to have a wider influence on the adolescent. The findings of their study generally mirrored the results of Blue's (1978) analysis. Peterson and Karnes found that older characters in their sample of books were not consciously discriminated against; were not portrayed as overwhelmingly senile, crippled, or ill; tended not to be excluded from the stories entirely; and were generally not all grandparents in a three-generation household.
However, it was reported that older characters were underdeveloped and peripheral to the major action of the books. Peterson and Karnes (1976) also found no difference between the older characters in books published earlier in the century and books of more recent publication.

Another study based on a content analysis of the 53 Newbery Medal winning books for adolescent literature, was performed by Peterson and Eden (1977). In the study, the researchers sought to determine what images of older people were presented. Their analysis disclosed that while older people were adequately represented numerically, the older characters were underdeveloped and consistently given peripheral roles within the plot. Peterson and Eden's analysis also showed that the average number of descriptive items per old character was 4.6 which was considered to be insufficient to show the older person as complex, motivated, and interesting.

Ansello (1977) examined the portrayal of the elderly in some 656 books classified as Juvenile Picture or Easy Reader books. These books, Ansello noted, comprised the literature aimed at children ages three to nine years. Consequently, the books represented the "initial literary socializing medium" (p. 264) for children. The adopted research format called for systematic analyses of the main character, occupational
role, behaviors exhibited, illustrations, physical and personality descriptions. Based on his analysis, Ansello (1977) concluded that

the cumulative impression of the older character to be derived from this body of literature is one of relatively unimportant, unexciting, and unimaginative entity...little or no affect—either positive or negative—typified the older character in book after book. The cumulative stereotype of age to emerge: noncreative and boring.

(pp. 269-270)

Robin (1977) performed a descriptive study which was concerned with determining the ways in which old people and old age were portrayed to children in grades one through six in four sets of reading textbooks from four publishers. A total of 47 books, published between 1953 and 1968, were analyzed in regard to text and illustrations and compared with a set of 33 readers all published in 1975. Robin's analysis revealed that more than 70% of the books contained stories with old characters. Fewer than 6% of the total characters in each set of texts were old. Although both sets of books were heavily illustrated, old characters were portrayed in fewer than 5% of the illustrations. In general, her conclusions were similar to those of Ansello (1977). Robin found that 1) the presentation of old characters was generally consistently positive in content and form across grade levels, but appeared to be quite neutral and bland in the more recent set; 2) earlier and later texts were quite similar in portray-
ing the aged; little change over time was noted; 3) the basic demographic age-sex distribution of the society was not reflected, nor was the existence of old minority group members given adequate representation; and 4) the character populations of neither series of texts matched or even approximated that of the general contemporary American society.

The Elderly in Jokes and Humor

A study (Palmore, 1971) was performed under the basic premise that items of popular culture, such as jokes, could be content analyzed to indicate the direction and intensity of attitudes toward a given subject or group, such as the aging. Palmore copied onto cards all the jokes and humorous quotations about aging and the aged from 10 popular joke books. He added to this list jokes about aging that he had heard or seen. The result was a total of 264 different jokes. The jokes were content analyzed in order to obtain an indication of how society depicts the aged in jokes. Palmore's analysis showed that 56% of the jokes about the aged were negative (27% were positive and the remaining 17% were neutral). The jokes dealing with aged men were more positive than the ones dealing with aged women. It may be that our society may have a "double standard" in which aging among women is viewed more negatively than aging among men.
Richman (1977) performed a replication of the Palmore (1971) study with a few changes. One hundred jokes about the aged were compared with 160 jokes about children. A negative attitude toward the aged and a positive one toward children emerged. About two-thirds of the jokes dealing with the older person were negatively or critically toned. Over 70% of the jokes about children were positive toward the child. However, the jokes about children were negative toward, or critical of, older persons—especially fathers, mothers, teachers, and other parent-figures. The results, therefore, confirm the interpretation that jokes do indeed reflect a more negative view of the older person than the younger, at least where children are involved. The majority of the jokes (65%), Richman analyzed dealt with older men rather than older women; and a larger percentage of the female jokes (over 70%) were negative (a finding which supported Palmore's previous analysis). Similar results were reported by Davies (1977).

The Elderly on Television

Aronoff (1974) described television as a "potential source of information about aging and social attributes associated with the various stages of the life cycle" (p. 86). Following an analysis of 2,741 characters in prime-time tele-
vision drama, he concluded that the aging are associated with "increasing evil, failure, and unhappiness" (p. 87). Only 40% of older male, and even fewer female (approximately 10%) characters, are seen as successful, happy, and good.

In another study limited to prime-time dramatic programs, Northcott (1975) performed a content analysis which suggested that the dominant group in the world of television was the mature adult (30 to 54 years of age). The old, he found, appeared infrequently on television and, like the young, were shown in contrast to the competent adult male or in contrast to the attractive adult female. Northcott's finding is supported by Britton and Britton's (1969b) study in which young adults were judged by the majority of the preschool children to be happy, healthy, and good-looking; children and older adults were rarely viewed in this way, however.

Harris and Feinberg (1977) sought to extend television inquiries beyond simply the dramatic programs to include commercials, comedy, news, game shows, and children's programming. They found that the problem of the older person on television was more one of quality than quantity. In the world of commercials, Harris and Feinberg found the portrait of the older person was essentially "unflattering, unhealthy, unstylish, and uninteresting" (p. 467). On network programs, the elderly were seen as being remarkably one-dimensional,
with older women being portrayed in a particularly harsh light. In contrast to men, women were found to experience tragic declines in esteem as age increased. In what may be an overstatement of the visual media's importance, Harris and Feinberg (1977) concluded that

if we accept the pivotal role of television in shaping American attitudes, it is no wonder then that so many Americans hold negative views of the aged- including the aged themselves. (p. 467)

Greenberg, Korzenny, and Atkin (1979) performed a recent (1975-1977) analysis on the behavior of the elderly on network fictional television. Two of their findings were quite striking: 1) from 1975 to 1977, the elderly were portrayed in no greater numbers than Aronoff (1974) found from 1969 to 1971; and 2) only about one-third of the television elderly each season had regular roles. With such limited opportunity (noting that some elderly characters would be on competing channels at the same time), a single viewer was likely to be watching no more than two of three old people in regular television roles throughout the season. The implication is that the elderly were underrepresented on the visual media. Greenberg et al.'s third finding, that the portrayal of older people on television was not predominantly a negative one, supports some earlier studies (e.g., Petersen, 1973).
Conclusions

The research findings suggest that attitudes toward the elderly generally reflect the acceptance of age-specific cultural stereotypes which are apparently fostered by the socialization process (Aaronson, 1966; Harris & Feinberg, 1977; Marcoen, 1979; McTavish, 1971; Tuckman & Lorge, 1953a; Tuckman et al., 1953). According to Peters (1971), the self-perceptions of old people are themselves formed as responses to cultural or social definitions of age. Furthermore, these definitions of age appear to be learned at a very early age. Hickey and Kalish (1968) have determined that by the age of eight years a child has already begun to develop attitudes toward old people. Other investigators (e.g., Marcoen, 1979; Seefeldt et al., 1977; Treybig, 1974) have suggested that children even younger than the ones Hickey and Kalish tested may harbor attitudes toward the elderly.

In an effort to determine the antecedents of adult attitudes toward aging, researchers began studying children's attitudes toward the elderly. Some studies have reported children to possess positive attitudes toward the elderly (e.g., Bear & Guy, 1976; Ivester & King, 1977; Thomas & Yamamoto, 1975), other studies have found children to hold negative attitudes toward the elderly (e.g., Kastenbaum & Durkee, 1964; Seefeldt et al., 1977; Weinberger, 1979), while still other
studies report children harboring both positive and negative attitudes toward old people (e.g., Hickey et al., 1968; Marcoen, 1979; Weinberger & Millhan, 1975) or feelings of ambivalence or "neutralism" (e.g., Britton & Britton, 1970; Lane, 1964). In short, the results of the research on children's attitudes toward the elderly have been contradictory and inconclusive. McTavish (1971) has commented that

Investigations of the subject differ in a number of respects: by source of data, instruments used, cultural areas covered, extent of analysis of attitudes in terms of other variables, and explanatory stance. (p. 90)

While the observations by McTavish may account for some of the differences in research conclusions, three areas of study appear to merit further consideration:

1. Attitudes toward the elderly do appear to emerge early in life (e.g., Hickey & Kalish, 1968; Marcoen, 1979). Having traced people's attitudes toward aging from adults and college students back to second graders, the next logical step is a study of the attitudes of kindergarten children and/or first graders toward the elderly;

2. A controversy has developed concerning a proposed difference in attitudinal response set toward personalized and nonpersonalized elderly (Crockett et al., 1979; Thomas & Yamamoto, 1975; Weinberger,
1979; Weinberger & Millhan, 1975). In light of the evidence, an examination of this variable appears justified; and

3. The role of contact between the subject and older persons has been discussed as a variable influencing respondents' attitudes toward the elderly (Drake, 1957; Marcoen, 1979; Rosencranz & McNevin, 1969; Tuckman & Lorge, 1958). Consequently, the inclusion of the effects of contact (daily, weekly, or monthly) in the present study appears to be necessary.
METHODOLOGY

The purpose of the present study is to investigate the attitudes of kindergarten children toward personalized and nonpersonalized elderly. This study also will compare the attitudes of the children's parents toward nonpersonalized elderly. Demographic variables investigated will include the amount of contact each child in the subject pool has with the personalized elderly, the age of the child, the sex of the child, and the sex of the parent.

Subjects

Following approval by the Superintendent of Schools and the School Board as well as by the Human Subjects Committee of Iowa State University (Appendix A), the study was introduced by letter to all families who had kindergarten children in the school system of a midwest town. The parent letter requested the involvement of father, mother, and child in the study. Children who had direct personal contact (either daily, weekly, or monthly) with at least one individual approximately 65 years of age or older were invited to participate. All families had the opportunity to refuse to participate if they wished. A copy of the cover letter, in which were explained the criteria for participation and the general
purpose of the study, and the parent consent form are found in Appendix B.

Of the 184 letters which were distributed through the schools to the families, 94 families agreed to participate in the study. Of the 94 families, 14 families were eliminated from the final sample because of incomplete data (either a missing father or mother checklist). All of the children (from the 80 families for whom both parent checklists were completed) cooperated in the study. Therefore, no subjects were eliminated because of the child's refusal to participate.

The participating children were 41 boys and 41 girls from one parochial and three public elementary schools. Subjects ranged in age from 64 months to 77 months. The mean age was 71.6 months. All subjects were Caucasian and residents of a farming and industrial community in the midwestern United States. The final sample was comprised of 80 mothers and fathers and 82 kindergarten children, including two sets of twins. All the children and parents were unfamiliar to the experimenter.

Pilot Study

A pilot study was conducted with seven children from the Child Development Laboratory School, Iowa State Univer-
sity, Ames, Iowa. Children ranged in age from 63 months to 72 months. Parent permission letters for the pilot study (Appendix B) were distributed to all parents through the school. Purposes for the pilot study included: 1) developing clear instructions for the children; 2) observing the child's comprehension and performance of the tasks; 3) possible revising of the tasks; and 4) observing the child's comprehension and performance on revised tasks where necessary. Subject responses were recorded by the experimenter on the questionnaire form and tape recorded by the experimenter for a further check of accuracy. The revisions based on the pilot study will be discussed in the section on instruments.

Instruments

Two instruments were used in the present study. The Children's Attitudes Toward the Elderly, CATE (Jantz, Sefeldt, Galper, & Serock, 1976) was revised by the experimenter for the present study and was administered to all the children individually at school. A copy of the revised CATE is found in Appendix C. The second instrument used to assess parents' attitudes to nonpersonalized elderly through their numerical ratings on a 10-item semantic differential checklist taken from the revised CATE. Both the father form and
Children's Attitudes Toward the Elderly

The GATE in its original form serves to assess children's attitudes toward old people through analysis of the effective, behavioral, and knowledge components of attitudes toward aging. In order to achieve both a balanced sample of items in the three component areas and an instrument appropriate for use with children ages 3 to 11, multiple assessment techniques (subtests) are employed (Jantz et al., 1976). A copy of the original GATE is found in Appendix E.

The child's performance on the Word Association subtest is thought to be an indication of cognitive and behavioral components of his attitude toward aging and the elderly. As a measure of the child's attitudes toward "young people" and "old people", the Semantic Differential subtest is used. The Picture Series subtest, consisting of pictures of younger and older people, assesses the children's attitudes toward the elderly. The final subtest, the Concept of Age, gives an indication of the child's level of cognitive development with regard to age concepts. Each test is said (Jantz et al., 1976) to reveal a different, yet important aspect of what the child knows about the elderly, what he feels toward them, and how he acts toward them.
Due to the selection of five- and six-year-olds as subjects for the present study, the original GATE was revised. The revised version of the GATE retained three of the four original subtests—Picture Series, Semantic Differential, and Concept of Age. The changes were deemed appropriate on the basis of theory and research (DiVesta, 1966; Inhelder, 1968; Piaget, 1965; 1969; Thorndike & Lorge, 1944) as well as on the outcome of a pilot study with kindergarten children.

The Word Association subtest, which serves as an indication of the cognitive and behavioral components of the child's attitudes toward the elderly (Jantz et al., 1976), was eliminated as a result of piloting. The Word Association subtest was fairly abstract and hence posed a difficult task for the kindergarten child to understand. Moreover, the retention of both the Concept of Age subtest (which provides an indication of the child's cognitive development) and the Picture Series subtest (which assesses the child's behavior and attitudes toward the elderly on a concrete level) made the Word Association subtest somewhat repetitious for children of kindergarten age.

The Picture Series subtest assessed the child's attitudes toward the elderly by presenting concrete visual representations of older and younger people to elicit responses. The pictures used in the Picture Series subtest are located
Jantz et al. (1976) noted that the utility of a concrete pictorial representation with children was grounded in research which indicated that young children have difficulty in handling abstract verbal concepts. The materials for this subtest were four 8 x 10 inch (20.3 x 25.4 cm) drawings of a lone male figure at different stages of the life cycle. The drawings were prepared by a professional artist after consultation with experts on the physiology of aging (Jantz et al.). The drawings depict full face portraits of Caucasian males. Sex, race, dress, and facial expressions were held constant in order that subjects' response to the pictorial representations of the four life stages would be based on the single variable of age. The Picture Series subtest was adopted in its original form. The procedures used in the Picture Series subtest are found in Appendix F.

The second subtest, a Semantic Differential (SD), employs a 10-item, four-point uni-polar scale on the Evaluative dimension of attitudes. In assessing attitudes toward the elderly, the SD has been used successfully in various research investigations (e.g., Rosencranz & McNevin, 1969; Seltzer & Atchley, 1971; Thomas & Yamamoto, 1975). Although most of the studies using the SD have tested subjects above the high school level, Thomas and Yamamoto found a SD to be of value in determining the attitudes of older children in grades 5,
7, 9, and 11.

It was evident from the pilot observations that the bipolar SD used in the original GATE was unclear to the young subjects. Subjects tended to respond only to the extremes of the scale. A uni-polar format, using only the positive adjective pair was indicated. Subsequent piloting with the uni-polar format produced greater gradation of children's responses. The uni-polar adjectives used in the subtest were selected for two reasons. First, the uni-polar adjectives are taken from the Evaluative factor of the original GATE. According to Jantz et al. (1976) the "Evaluative factor accounts for the largest part of the total variance in comparison to other factors" (p. 10). It also has been determined (DiVesta, 1966) that the dominant dimension affecting children's ratings of various concepts is the Evaluative factor. DiVesta (1966) defined the Evaluative factor by the scales "sweet-sour, awful-nice, smooth-rough, unfriendly-friendly, pretty-ugly, wonderful-terrible, bad-good, clean-dirty, cruel-kind, and helpful-harmful" (p. 251). Second, the adjectives from DiVesta's Evaluative factor obtained high factor loadings through his investigations on how children in grades two through seven rated more than 100 common items (e.g., Mother, Father, Me). Moreover, the revised form developed for the present study, was limited to the 3,000 most common words in
the English language (as determined by Thorndike & Lorge, 1944) and it incorporated adjectives representative of previous investigations (DiVesta, 1966; Rosencranz & McNevin, 1969; Thomas & Yamamoto, 1975).

As a result, the SD in the revised CATE differs from the one originally designed by Jantz et al. (1976) in three major areas. First, the SD constructed for the revised CATE is based on a uni-polar rather than bi-polar scale. Second, due to the younger age range of subjects in the present study, the adjectives used in the SD in the revised CATE were restricted to only the adjectives of the Evaluative factor. Third, while the SD in the original CATE rated the two concepts of "young people" and "old people", the revised CATE rated the two concepts of "personalized elderly" and "non-personalized elderly". The procedures used in the Semantic Differential subtest are found in Appendix F.

The conviction that there is a strong cognitive-developmental factor in children's understanding of age concepts led to the development of the Concept of Age subtest. Jantz et al. (1976) based the subtest on Piagetian Theory (Piaget, 1969). However, there have been few other attempts to develop measurement techniques and procedures to assess the relevance of Piagetian Theory applied to children's concepts of age.
The form of the subtest used in the present study represents what this experimenter views as a refinement of the original version designed by Jantz et al. (1976). Rather than using repetitious questions, this subtest has been streamlined from the original 12 questions to include just four problems. However, these four problems reflect the major areas originally posed by Piaget (1969):

1. Does the child look upon aging as a continuous process in time? Is this process the same for all individuals?

2. Does the child associate age differences with birth order? This involves the relationship between duration (age itself) and succession (or the seriation of births).

3. Is age associated with size of height and not viewed as a continuum in its own right?

4. Does the child understand that age differences are maintained throughout life?

The procedures used in the Concept of Age subtest are found in Appendix F.

Parent checklists

Parents' attitudes toward nonpersonalized elderly were assessed through their written responses to a 10-item, bi-
polar semantic differential checklist based on a four-point scale. The parent checklist was constructed by taking the 10 adjectives from the semantic differential of the revised CATE and matching negative (or opposite) adjectives to each one of them to make them bi-polar. In an effort to guard against subject response set, the polarity of the scales was rotated so half were in one direction and half in the other. The poles of the adjectives were randomly mixed so that each column contained five positive and five negative words.

Procedures

The experimenter received permission to conduct the study from the University Committee on the Use of Human Subjects in Research, Iowa State University, Ames, Iowa, the Superintendent of Schools and the School Board for the Community School District used, and the Director of the parochial school which participated. Principals and teachers were introduced to the study, and a schedule for testing was arranged with the teachers. Before interviews with the children began, a parent permission package (consisting of cover letter, consent form, father checklist, and mother checklist) was sent home with the children. The final sample was based on the responses from those 80 families for whom data were complete.
On receipt of parental consent, interview schedules were arranged for children of parents who had completed both the father and mother checklists. Each child was administered the CATE in a quiet room provided by the school principal. The room was either the nurse's room, an empty classroom, or the testing room used by the school psychologist. A child-sized table and chairs were provided.

The child was escorted by the experimenter from the classroom to the testing room. The experimenter visited with the child along the way in an effort to establish rapport. The experimenter had already been introduced to the children by the teacher. Once seated at the testing room, the experimenter instructed the child on how to operate the tape recorder and the child was asked to start the recorder for the experimenter. The child was administered the CATE subtests in the order of Picture Series, Semantic Differential, and Concept of Age. The ordering of the subtests was set prior to any CATE administrations and followed established procedures for instructing five-year-old children, namely, beginning with the most concrete and active tasks and moving toward the more abstract ones. Thus, the Picture Series subtest was presented first. After the child's initial involvement in the CATE was established, the child was then presented with a slightly more abstract task (the Semantic Differ-
ential subtest which includes a concrete concept, the personalized elderly, and an abstract concept, the nonpersonalized elderly). Finally, a more abstract task (the Concept of Age subtest) was administered. Subject responses were recorded by the experimenter on the CATE form and tape recorded for further accuracy. At the end of testing, each child had an opportunity to hear himself or herself on the tape recorder. The child was thanked for his or her participation and was escorted back to the classroom following the administration of the CATE.

Scoring and Analysis

The child's birth date was obtained from the school records. Data on the amount of contact the child had with the personalized elderly were provided by the parent on the parent consent form. Objective items on the CATE (e.g., the child's responses to the semantic differential) were scored directly by the experimenter during the administration of the CATE. In an effort to control a threat to the internal validity of the study, subjective items (six in the Picture Series and four in the Concept of Age subtests) were scored by two trained independent judges who were "blind" to the objectives of the study. A detailed scoring manual (Appendix F) was developed by the experimenter for the revised instrument.
The two judges rated the subjective responses according to the protocols established in the Judges Scoring Manual. A copy of the Judges Scoring Manual is found in Appendix G. The judges first were given the manual to read and then participated in a short training session (approximately 40 minutes) to answer questions and to go over two sample cases from the pilot study.

All data were punched according to the code sheet located in Appendix H.

Pearson Product Moment correlation coefficients were calculated based on all variables in the study (sex of child, sex of parent, age of child, type of elderly (personalized or nonpersonalized), contact with a personalized elderly person, and judges' ratings of the child's responses to subjective items). A correlation coefficient at or beyond the .05 level of probability was considered significant. With a sample of 82, a correlation of .21 is necessary to reach the .05 level of probability.

Chi-square analyses of children's concepts of aging by sex of child were performed to test for differences in attitudes toward aging. A chi-square value at or beyond the .05 level of probability was considered significant. With one degree of freedom, a chi-square value of 3.8 is necessary to reach the .05 level of probability.
A two-tailed matched-pair $t$-test was performed to test for differences between the means of the children's and parents' attitudes toward personalized and nonpersonalized elderly. A matched-pair $t$-test was performed because the means are based on family units (father, mother, child) rather than on an independent sample of fathers, mothers, and children. A $t$ value at or beyond the .05 level of probability was considered significant. With 81 degrees of freedom, a $t$ value of 1.98 is necessary to reach the .05 level of probability.
RESULTS

The present study focused on six areas of hypothesized relationships with regard to children's attitudes toward the elderly: sex of child, sex of parent, age of child, child's and parents' attitudes toward nonpersonalized elderly, and the amount of contact by the child with a personalized elderly person. The independent variables were sex of child, sex of parent, age of child, type of elderly (personalized or nonpersonalized), and amount of contact by the child with a personalized elderly person. The dependent variables were the child's responses to the CATE and the parents' responses to the father or mother checklist.

Major Findings

Sex of child

Correlations between the sex of children and their attitudes toward the elderly are located in Table 1. Sex of children and their attitudes toward personalized elderly correlated nonsignificantly ($r = .17, p > .10$). Sex of children and their attitudes toward nonpersonalized elderly correlated nonsignificantly ($r = .07, p > .50$). However, a highly significant correlation occurred between sex of children and judges ratings of children's Picture Series attitudes toward
Table 1. Correlation coefficients between the variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ch-Sex</th>
<th>Ch-Per</th>
<th>Ch-Npr</th>
<th>Pa-Npr</th>
<th>Ma-Npr</th>
<th>Contact</th>
<th>Ch-Age</th>
<th>Judge1</th>
<th>Judge1</th>
<th>Judge2</th>
<th>Judge2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch-Sex</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Ch-Per</td>
<td>.17</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Ch-Npr</td>
<td>.07</td>
<td>.63**</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Pa-Npr</td>
<td>.04</td>
<td>.04</td>
<td>.20</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Ma-Npr</td>
<td>-.14</td>
<td>-.15</td>
<td>.01</td>
<td>.55**</td>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Contact</td>
<td>-.07</td>
<td>.07</td>
<td>-.01</td>
<td>.06</td>
<td>.04</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Ch-Age</td>
<td>.00</td>
<td>-.02</td>
<td>-.07</td>
<td>.09</td>
<td>.02</td>
<td>-.10</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Judge1</td>
<td>-.30**</td>
<td>-.03</td>
<td>.04</td>
<td>.01</td>
<td>.09</td>
<td>.15</td>
<td>-.14</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>S1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>Judge1</td>
<td>-.05</td>
<td>.21*</td>
<td>.27**</td>
<td>-.02</td>
<td>.01</td>
<td>-.13</td>
<td>.07</td>
<td>.29**</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>S2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>Judge2</td>
<td>-.29**</td>
<td>-.06</td>
<td>-.05</td>
<td>.02</td>
<td>.16</td>
<td>.14</td>
<td>-.18</td>
<td>.94**</td>
<td>.27**</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>S1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>------</td>
</tr>
<tr>
<td>Judge2</td>
<td>.02</td>
<td>.21*</td>
<td>.25*</td>
<td>.05</td>
<td>.06</td>
<td>-.14</td>
<td>.03</td>
<td>.27**</td>
<td>.93**</td>
<td>.26*</td>
<td>------</td>
</tr>
<tr>
<td>S2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>------</td>
</tr>
</tbody>
</table>

*Per = Attitudes toward personalized elderly; Npr = Attitudes toward nonpersonalized elderly; Contact = Child's contact with personalized elderly; S1 = Child's attitudes toward aging; S2 = Child's cognitive reasoning on concepts of age.

** \( r = .21, p < .05 \)

** \( r = .27, p < .01 \)
aging. Children's sex by Judge I rating of children's attitudes ($r = -.29$, $p < .01$) and by Judge II rating ($r = -.29$, $p < .01$) suggest that male children tend to report more favorable attitudes toward the elderly than female children.

Chi-square analyses of children's attitudes toward aging by sex of children were performed on six concepts of attitudes toward the elderly. The results of the chi-square analyses are located in Table 2. Four of the six concepts of aging (reason for recognizing oldest man, helping behavior toward oldest man, feelings about getting old, and reason for adult associational preference) were concepts which composed the Picture Series attitudes above, and for which a significant correlation with sex was found. The chi-square for sex of children and their reason for recognizing the oldest man was significant ($\chi^2 = 3.99$, $p < .05$) suggesting that children recognize the oldest man on the basis of physical-descriptive cues. The chi-square for the children's adult associational preference also proved to be significant ($\chi^2 = 6.46$, $p < .05$) with sex and suggests that male children prefer being with the youngest man rather than the three older men in the Picture Series subtest.

Since sex of children is significantly related to some of the children's attitudes toward the elderly and since significant sex differences do occur for children's attitudes
Table 2. Chi-square analyses of children's concepts of aging by sex of child

<table>
<thead>
<tr>
<th>Concept</th>
<th>Sex</th>
<th>Frequency</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to recognize oldest man</td>
<td>M</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Reason for recognizing oldest man</td>
<td>M</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>Helping behavior toward oldest man</td>
<td>M</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>Feelings about getting old</td>
<td>M</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Adult associational preference</td>
<td>M</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Reason for adult associational preference</td>
<td>M</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

\( \chi^2 = 3.8, p < .05 \).
toward elderly persons, the null hypothesis that there is no relationship between children's sex and their attitudes toward elderly persons is rejected.

Sex of parent

Correlations between fathers' attitudes and mothers' attitudes toward nonpersonalized elderly are located in Table 1. Fathers' and mothers' attitudes toward nonpersonalized elderly correlated significantly ($r = .55, p < .01$). On the basis of these data, the null hypothesis that there is no relationship between parents' sex and their attitudes toward elderly persons is rejected.

Results of the matched-pair $t$-test between the means for fathers' and mothers' attitudes toward nonpersonalized elderly are located in Table 3. A matched-pair $t$-test between the means for the fathers' and mothers' attitudes toward the nonpersonalized elderly show the means not to be significantly different ($t = 1.42, p > .05$). An inspection of the respective means themselves (33.2 for fathers' and 33.8 for mothers' out of a possible maximum rating of 40) indicated not only the similarity between the two groups but also the fact that both mothers' and fathers' rated the nonpersonalized elderly in a very favorable manner. On the basis of these data, the null hypothesis that there is no difference between the means of mothers' and fathers' in their attitudes toward elderly
Table 3. Means and comparisons between children's and parents attitudes toward the elderly

<table>
<thead>
<tr>
<th>Attitudes Toward Elderly</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>t</th>
<th>ChPer</th>
<th>ChNpr</th>
<th>PaNpr</th>
<th>MaNpr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children to personalized (ChPer)</td>
<td>32.4</td>
<td>5.57</td>
<td>-----</td>
<td>3.33**</td>
<td><em>a</em></td>
<td><em>a</em></td>
<td></td>
</tr>
<tr>
<td>Children to non-personalized (ChNpr)</td>
<td>30.6</td>
<td>6.02</td>
<td>-----</td>
<td>3.58**</td>
<td>5.02**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fathers to non-personalized (PaNpr)</td>
<td>33.2</td>
<td>4.14</td>
<td>-----</td>
<td>1.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers to non-personalized (MaNpr)</td>
<td>33.8</td>
<td>4.09</td>
<td>-----</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*aThis comparison is not meaningful.

**$t = 2.64, \ p < .01.$
persons fails to be rejected.

**Age of child**

Correlations between children's age and their attitudes toward the elderly are located in Table 1. Age of children and their attitudes toward personalized elderly correlated nonsignificantly ($r = -0.02, p > 0.85$). Similarly, age of children and their attitudes toward nonpersonalized elderly correlated nonsignificantly ($r = -0.07, p > 0.50$). On the basis of these data, the null hypothesis that there is no relationship between children's age and their attitudes toward elderly persons fails to be rejected.

**Children's and parental attitudes toward nonpersonalized elderly**

Correlations between the attitudes of children and their parents toward nonpersonalized elderly are located in Table 1. Children's and their fathers' attitudes toward nonpersonalized elderly correlated nonsignificantly ($r = 0.20, p > 0.05$). Similarly, children's and their mothers' attitudes toward nonpersonalized elderly correlated nonsignificantly ($r = 0.01, p > 0.90$). On the basis of these data, the null hypothesis that there is no relationship between the attitudes of children and their parents toward nonpersonalized elderly fails to be rejected.
A matched-pair $t$-test between the means for fathers' and their children's attitudes toward nonpersonalized elderly shows the means to be highly significantly different ($t = 3.58$, $p < .01$). A matched-pair $t$-test between the means for mothers' and their children's attitudes toward nonpersonalized elderly shows the means to be highly significantly different ($t = 5.02$, $p < .01$). These data are presented in Table 3. An inspection of the means themselves (33.2 for fathers', 33.8 for mothers', and 30.6 for children out of a possible maximum rating of 40) indicated that all three groups possessed very favorable attitudes toward nonpersonalized elderly. On the basis of these data, the null hypothesis that there is no difference between the means of children's and their parents' attitudes toward nonpersonalized elderly is rejected.

Children's attitudes toward the elderly

Correlations between children's attitudes toward personalized and nonpersonalized elderly are located in Table 1. Children's attitudes toward personalized and nonpersonalized elderly correlated significantly ($r = .63$, $p < .01$). Children's cognitive reasoning on concepts of age also was found to be significantly correlated with their attitudes toward personalized ($r = .21$, $p < .05$ for both Judge I and II) and nonpersonalized elderly ($r = .27$, $p < .01$ for Judge I and
r = .24, p < .05 for Judge II) suggesting a relationship between children's attitudes toward the elderly and their cognitive reasoning on age concepts.

Since children's attitudes toward personalized and nonpersonalized elderly are significantly related to each other and to the children's cognitive reasoning on the concept of age, the null hypothesis that there is no relationship between the attitudes of children toward personalized and nonpersonalized elderly is rejected.

Table 3 depicts the results of a matched-pair t-test of the difference between the means for children's attitudes toward personalized and nonpersonalized elderly which were highly significantly different (t = 3.33, p < .01). An inspection of the means themselves (33.4 for personalized and 30.6 for nonpersonalized elderly out of a possible maximum rating of 40) not only indicated that children view both groups of elderly very favorably but that the children rated the personalized elderly more favorably than the nonpersonalized elderly.

Since significant differences exist between children's ratings of personalized and nonpersonalized elderly, the null hypothesis that there is no difference between the means of children's attitudes toward personalized and nonpersonalized elderly is rejected.
Table 4. Children's contact with personalized elderly

<table>
<thead>
<tr>
<th>Contact</th>
<th>Sex</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>With a relative</td>
<td>M</td>
<td>7</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>3</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>With a nonrelative</td>
<td>M</td>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Children's contact with personalized elderly

Correlations between the amount of contact a child has with a personalized elderly person and the child's attitude toward the elderly are located in Table 1. Children's contact with a personalized elderly person and their attitudes toward personalized elderly correlated nonsignificantly \( r = .07, p = .50 \). Similarly, children's contact with a personalized elderly and their attitudes toward nonpersonalized elderly correlated nonsignificantly \( r = -.01, p = .90 \). The demographic data on children's contact with the personalized elderly are presented in Table 4. On the basis of the data, the null hypothesis that there is no relationship between the amount of contact a child has with a personalized elderly per-
son and their attitudes toward personalized and nonpersonalized elderly fails to be rejected.

Ancillary Findings

Judge reliability

In general, the two judges were consistent in terms of the category in which a behavioral unit was assigned. Correlations between the two judges and the other variables in the study are located in Table 1. From the Picture Series subtest, the judges rated six items which comprised the child's subjective attitudes toward aging (referred to as Subjective One). A highly significant correlation was found between the rating of Judge I and Judge II ($r = .94$, $p < .01$) on the Subjective One concept. From the Concept of Age subtest, the judges rated four items which comprised the child's subjective cognitive reasoning on concepts of age (referred to as Subjective Two). A highly significant correlation was found between the rating of Judge I and Judge II ($r = .93$, $p < .01$) on the Subjective Two concept. The highly significant correlations between judges for the two subjective concepts are presented as support of interjudge agreement.
Summary of Results

Children's sex correlated significantly with their attitudes toward the elderly. Male children reported more favorable attitudes toward the elderly but also tended to prefer associating with the younger man in the Picture Series subtest significantly more often than with the three older men combined. Children also demonstrated a significant preference for basing their recognition of the oldest man on physical-descriptive cues.

A highly significant correlation was found between children's attitudes toward personalized and nonpersonalized elderly. The difference between the means for the children's attitudes toward personalized and nonpersonalized elderly was highly significant. However, the absolute difference between the means for the children's attitudes toward personalized and nonpersonalized elderly may be too small to be of any practical importance. A significant relationship between children's attitudes toward the elderly and judges' ratings of children's cognitive reasoning on age concepts was found.

The amount of contact the child has with a personalized elderly person, the age of the child, and the parents' attitudes toward nonpersonalized elderly were all not significantly correlated with the child's attitudes toward the elderly. The attitudes of mothers' and fathers' toward nonpersonalized
elderly were significantly correlated with each other however. The attitudes of children toward the elderly and the attitudes of parents toward the nonpersonalized elderly all were very favorable.

Judges ratings of the two subjective concepts were highly correlated suggesting a high level of interjudge agreement.
DISCUSSION

The present study focused on six areas of hypothesized relationships with regard to children's attitudes toward the elderly: sex of child, sex of parent, age of child, child's and parents' attitudes toward nonpersonalized elderly, child's attitudes toward personalized and nonpersonalized elderly, and the amount of contact by the child with a personalized elderly person.

Major Findings

Sex of child

Significant sex differences were found for children's attitudes toward elderly persons. The discovery of significant sex differences is contrary to the findings of several studies (e.g., Britton & Britton, 1970; Ivester & King, 1977) that reported no or little sex differences in the responses of older children and adolescents. Marcoen (1979), however, found sex of child to be significantly related to school-age (second through sixth grade) children's attitudes toward the elderly. Similarly, Tuckman et al. (1953) reported male college undergraduate students to express more stereotypic beliefs about the aged than female undergraduates. The pattern which appears to emerge from the research on aging is for sex
differences to be significant during early childhood, disappear or diminish during late childhood and adolescence, and then to re-emerge during young adulthood.

The findings of the present study would appear to fit the pattern of sex differences as described above. In the Picture Series attitudes toward aging, male children tend to report more favorable attitudes toward the elderly than female children. Male children also have a significant preference for associating more with the youngest man in the Picture Series than the three older men combined.

One reason for the observed sex differences may be found in the large number of "no response" classifications assigned to the female children. An examination of the children's responses to the Picture Series attitudes toward aging reveals that nearly twice as many female as male responses (47 versus 28) were assigned to the "no response" category. A "no response" was operationally defined in the revised GATE test manual as a "no response, inappropriate response, or I don't know". Since such responses provide no meaningful information on the child's attitudes toward aging, they were considered to be the most immature or unfavorable response the child could make. The large number of "no responses" for the female children apparently influenced the total of the female responses in an unfavorable direction.
Two possible explanations for the large number of "no responses" associated with the female children are: First, the female children may have been somewhat shy to respond to questions posed by an unfamiliar adult male. In each school visited, only the principal and janitor were adult males. Hence, with such a limited opportunity to interact with an adult male (within the school environment), the female children may have been unsure how to behave with the experimenter and this uncertainty may have inhibited the range of female responses. Second, the use of only male stimulus pictures in the present study combined with predominantly female personalized elderly contact (for 60 of the 82 children) may have contributed to the large number of "no responses" associated with the female children.

The male children's preference for the youngest man in the Picture Series is explained by the types of activities the male children report they would share with the youngest man. Male children generally saw the youngest man as a type of playmate with whom they could indulge in such games as catch, basketball, and camping. Thus, male children based their selection on the premise that the youngest man would be the most active one.

Seefeldt et al. (1977) found that the children in their study generally reported picking the man they did as the oldest on the basis of physical-descriptive cues. The present
study also found that children base their selection of the oldest man on physical-descriptive cues thus supporting Seefeldt et al.'s discovery.

Sex of parent

A significant relationship was found between the attitudes of fathers and mothers toward nonpersonalized elderly. Similarity of parental attitudes has been previously discovered with the parents of college students (Tuckman et al., 1953). The appearance of comparable parental attitudes toward the elderly implies that the child is receiving a unified role model on how to act toward the elderly. The importance of the consistency of parents rests in the fact that it teaches the child how to act toward a certain group (Thomas, 1979) by presenting the child with a clear set of behavioral consequences.

There are several possible reasons for the similarity in fathers' and mothers' attitudes toward nonpersonalized elderly. First, attitudes toward the elderly are a social issue and like other social issues confront the subject with a desire to respond in a socially favorable manner. Consequently, the parents may have responded with favorable attitudes simply because they interpreted this as a way of creating a positive self-image. Second, although the order in which the adjective pairs were presented was reversed on the
checklists (father and mother), parents may have worked in
unison on the forms thereby contributing to similar responses.
Third, the similarity between the parental responses may be
due to the sharing of a common home environment for the past
several years.

Age of child

Children's age and children's attitudes toward the elder-
ly correlated nonsignificantly in the present study. In se-
lecting the sample population, the examiner hoped that a sub-
ject pool based on kindergarten children would be homogeneous
in age so as to prevent any significant age of child relation-
ships. The question of age became of greater concern after
the sample population showed a 13 month age range. Since age
did not correlate significantly with any of the other vari-
ables it is assumed that a 13 month age spread still permits
fairly homogeneous concepts and/or attitudes with the sample
children with respect to the aging process. Several other
studies (e.g., Hickey & Kalish, 1968; Ivester & King, 1977)
have reported finding no significant age of subject differ-
ences, but their samples have been older children and adoles-
cents.
Children's and parental attitudes toward nonpersonalized elderly

The results of a matched-pair t-test analysis in the present study found the means between fathers and children for attitudes toward nonpersonalized elderly to be highly significantly different. Similarly, the t-test analysis for the means between mothers and their children's attitudes toward nonpersonalized elderly showed the means to be highly significantly different.

All three groups (fathers, mothers, children) reported very favorable attitudes toward nonpersonalized elderly suggesting a contribution to the subject's attitudes by their shared home environment. An inspection of the means shows that while the difference between them is statistically significant, the absolute difference (just over three points separated the three means) may be too small to be of any practical importance. The difference in the instruments the subjects used must also be considered. Although both the parents and the child completed similar scales, the child responded to a uni-polar version (with just the positive evaluative adjective present) while the parents responded to a bi-polar version (the same positive adjectives as the child re-
sponded to but matched with negative evaluative adjectives to form the other pole). Therefore, the significant difference reported for the means between parents and their children's attitudes toward nonpersonalized elderly may be more the result of the version of the scale completed rather than differences between members of the same household.

Children's attitudes toward the elderly

The finding of favorable attitudes toward the elderly (personalized and nonpersonalized) in the present study supports and extends the research of Thomas and Yamamoto (1975) who found older children (5th through 12th grade) to hold favorable views toward the elderly. Weinberger (1979) has criticized Thomas and Yamamoto's method for allowing the children in their study to "personalize" the elderly to which the children responded. Weinberger's criticism has support in the research. Several other investigators (e.g., Crockett et al., 1979; Weinberger & Millhan, 1975) have established that college students tend to respond more favorably toward a personalized, rather than a nonpersonalized, elderly. The present study controlled for Weinberger's criticism of Thomas and Yamamoto by studying children's attitudes toward both personalized and nonpersonalized elderly. The children's means toward personalized and nonpersonalized elderly were signifi-
cantly different. Results of the present study also found, as previous research had predicted (Crockett et al., 1979; Weinberger & Millhan, 1975), that children report even more favorable attitudes toward the personalized than the nonpersonalized elderly. Both means were, however, very favorable toward the elderly suggesting that young children do possess favorable attitudes toward both groups (personalized and nonpersonalized) of elderly. Consequently, the present study refutes Weinberger's (1979) claim that young children possess negative views toward the elderly.

Weinberger and Millhan (1975) reported that for college students the expression of belief statements toward a group was a separate response system from the judgments of a particular member of that group. Results of this study fail to support the existence of such a response system in young children. The observed significant correlation between children's attitudes toward personalized and nonpersonalized elderly suggest that kindergarten children have not yet evolved this separate response system found in older subjects. Rather, the data from the present study argue for the existence of a common attitude response system in young children with respect to attitudes toward the elderly.
Children's contact with personalized elderly

Results of the present study show that children's contact with personalized elderly and children's attitudes toward personalized and nonpersonalized elderly correlated non-significantly. Similarly, children's contact with the personalized elderly did not correlate significantly with any of the other variables in the study. This finding is comparable to previous research with adolescents (e.g., Ivester & King, 1977) and college students and adults (e.g., Drake, 1957) which found little or no relationship between subjects contact with elderly and their attitudes toward elderly.

Ancillary Findings

Limitations of the investigation

One of the limiting factors in the present investigation was the use of self-reporting attitude scales which attempted to assess parental and children's attitudes toward the elderly. As a result, a subject may have responded with a more favorable attitude than they actually possess in order to achieve a higher level of social desirability. With regard to attitudes toward the elderly, there also may be differences between subject's reported behavior and actual behavior. Direct observation of parent and child behavior by independent
raters has been used in the research in areas other than attitudes toward the elderly (White & Watts, 1973). A possible combination procedure using subject's self-reports and direct observation of subject's behavior toward the elderly would permit a researcher to determine if the subject's reported attitudes toward the elderly were actually practiced. However, to conduct such an extensive investigation was beyond the scope of the present study.

The use of a semantic differential in the present study introduced several difficulties. First, young children, such as those who would participate in the study, had difficulty with the semantic differential's bi-polar scale during piloting necessitating a change to a uni-polar scale. Thus, the differences in scale format between parents (who responded on a bi-polar scale) and children (who responded on a uni-polar scale) may have contributed to the findings of significant differences between the means of the different groups. Second, the reliability of the data generated by the semantic differential is higher when responses are based on two or more factors rather than when only a single factor is used (DiVesta & Dick, 1966). However, given the young age range of the subjects, a two-factor semantic differential was not feasible. DiVesta (1966) has recommended that only the Evaluative factor (which was used in the present study) be tested
with young children.

The large number of female responses classified by the judges as being "no response" have to be viewed as a limitation of the investigation. Since the "no response" was established as being the most immature/unfavorable response the child could make prior to the administration of the revised CATE, the large number of "no responses" by female children in the Picture Series subtest may have artificially created a rating for females of an unfavorable attitude toward the elderly. The use of both male and female stimulus pictures in future research on attitudes toward the elderly with children may be a means of solving the "no response" problem. Another way of rectifying the problem of "no responses" would be to incorporate more probes into the questionnaire. Each probe would need to include an item from each category possible for that question. While the use of probes has received limited attention in past instruments with older subjects, the inclusion of probes may be necessary to glean information from younger children.

Implications for further research

The present study is correlational and therefore causality could not be established. Some correlations may have been significant because of the number of correlations calculated among the variables. As a result, the present study,
like most of the research on attitudes toward aging, has begged the issue of what causes favorable or unfavorable attitudes toward the elderly in the population. In order to establish the causes behind people's attitudes toward the elderly, noncorrelational research will have to be performed. In the meantime, researchers can utilize correlational data to identify potentially interesting relationships for future investigation.

One important area which the present study addressed but which has been generally ignored in the past research on attitudes toward the elderly, is the role of the family. Knowledge of how parental attitudes toward the elderly influence their children's developing concepts of aging and the aged as well as the child's impact on parental attitudes would appear to be an area deserving future scrutiny.

A third area of possible research would involve the identification of the response system which regulates attitudes toward personalized and nonpersonalized elderly. Research on the response system becomes of interest given the discovery of a single response system with young children (in the present study) and a separate response system in young adults (Weinberger & Millhan, 1975). Determining how the system evolves and when it develops may provide valuable insights into understanding people's attitudes toward aging.
More research directed at exploring attitudes toward the elderly with children is imperative. Early studies on attitudes toward the elderly concentrated on college students and adult samples. Only within the last five years have social scientists taken a serious look at how the young child feels toward the elderly. Questions concerning when attitudes of aging develop and how much the young child knows about aging have yet to be answered.

Finally, there is a need for uniformity of methods and instruments used in the investigation of attitudes toward the elderly. Such a call for uniformity may be premature at this juncture in the research process since social scientists are still developing and refining instruments and methods for assessing attitudes on aging. However, a major source of confusion in the research literature exists due to the large number of contradictory findings that are reported. The use of different instruments has often yielded conflicting results even within the same subject pool. A sense of agreement among researchers with regards to methods to be used appears necessary in order to produce advancements in the field.
SUMMARY

The present investigation was conducted to determine the attitudes of kindergarten children toward personalized and nonpersonalized elderly. Relationships between the variables sex of child, sex of parent, age of child, child's contact with a personalized elderly person, and judges ratings of the child's responses to subjective items also were explored.

Subjects were 41 male and 41 female kindergarten children who ranged in age from 64 months to 77 months. The mothers and fathers of the 82 children also participated in the study.

The Children's Attitudes Toward the Elderly, CATE (Jantz, Seefeldt, Galper, & Serock, 1976) was revised by the experimenter for the present study and served as a measure of children's attitudes on the concepts of aging and the aged. Parental attitudes toward aging were assessed by a 10-item semantic differential checklist taken from the revised CATE.

Pearson Product Moment correlations were calculated to test the relationships between the variables. Chi-square analyses of children's concepts of aging by sex of child were performed to test for differences in attitudes toward aging. A two-tailed matched-pair t-test was performed to test for differences between the means of the children's and their
parents' attitudes toward the elderly.

Results indicated that children's sex correlated significantly with their attitudes toward the elderly. Male children reported more favorable attitudes toward the elderly but also tended to prefer associating with the younger man in the Picture Series subtest significantly more often than with the three older men combined. Children also demonstrated a significant preference for basing their recognition of the oldest man on physical-descriptive cues.

The difference between the means for children's attitudes toward personalized and nonpersonalized elderly was highly significantly different, with more favorable attitudes reported for the personalized elderly. However, the highly significant correlation found between children's attitudes toward personalized and nonpersonalized elderly suggests the existence of a common attitude response system in young children with respect to attitudes toward the elderly.

The amount of contact children have with a personalized elderly person, the age of children, and the parents' attitudes toward nonpersonalized elderly were not significantly correlated with children's attitudes toward the elderly. Attitudes of children and their parents toward the elderly were favorable.

Results were discussed and limitations of the study and implications for future research were considered.
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Duncan, K. J. Modern society's attitude toward aging. Geriatrics, 1963, 18, 629-635.


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Tuckman, J., & Lorge, I. When does old age begin and a worker become old. Journal of Gerontology, 1953, 8, 483-488. (b)

(c)


ACKNOWLEDGMENTS

The writer would like to take this opportunity to express his sincere appreciation to the many people who helped in the completion of this research project.

In particular, I would like to express my deepest gratitude to Dr. Sam Clark for his unwavering support, guidance, and expertise not only during the planning, execution, and writing of this study, but also throughout my graduate program.

To Dr. Leroy Wolins, I extend my special thanks for his consultation and assistance in working out design problems and the statistical analysis of the data.

For their numerous suggestions, generous cooperation, and constant interest, the writer wishes to express his appreciation to his committee members, Dr. Don Charles, Dr. Damaris Pease, and Dr. Dahlia Stockdale.

A special note of thanks is extended to the school personnel, parents, and children for their hospitality, cooperation, and willingness to participate in the study.

To Dr. Susan Hegland, my appreciation for the interest, understanding and encouragement she expressed in my graduate program.
To my mother and father, a very special debt of gratitude for their support, interest, and encouragement during my graduate program but especially for their never losing faith in me, even during those times I lost faith in myself.

Finally, to my grandparents, who inspired this study, this one's for you.
APPENDIX A

HUMAN SUBJECTS APPROVAL
Title of project (please type): Kindergarten children's attitudes toward personalized and nonpersonalized elderly

I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

Karl E. Fernandes 11-21-80 Karl C. Fernandes
Typed Named of Principal Investigator Date Signature of Principal Investigator
7173 Buchanan Hall 294-2381
Campus Address Campus Telephone

Signatures of others (if any) Date Relationship to Principal Investigator

ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

☐ Medical clearance necessary before subjects can participate
☐ Samples (blood, tissue, etc.) from subjects
☐ Administration of substances (foods, drugs, etc.) to subjects
☐ Physical exercise or conditioning for subjects
☐ Deception of subjects
☐ Subjects under 14 years of age and (or) ☐ Subjects 14-17 years of age
☐ Subjects in Institutions
☐ Research must be approved by another institution or agency

ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.

☐ Signed informed consent will be obtained.
☐ Modified informed consent will be obtained.

Anticipated date on which subjects will be first contacted: 1 19 81
Anticipated date for last contact with subjects: 2 27 81

If Applicable: Anticipated date on which audio or visual tapes will be erased and (or) identifiers will be removed from completed survey instruments: 6 1 81

Signature of Head or Chairperson Date Department or Administrative Unit

Decision of the University Committee on the Use of Human Subjects in Research:
☒ Project Approved ☐ Project not approved ☐ No action required
George G. Karas 11-25-80
Name of Committee Chairperson Date Signature of Committee Chairperson
APPENDIX B

PARENT INFORMED CONSENT FORMS
Dear Parents,

I am working on my doctoral degree in Child Development at Iowa State University. With more and more people living into a comparatively active and healthy old age, people's attitudes toward the elderly have become both an interesting and important issue. For my dissertation research, I plan to explore young children's understanding of aging and their attitudes toward the elderly. However, to meet this degree requirement, I need your help and that of your child.

In the near future (if you consent), while your child is attending kindergarten, I would like your child to take about 20 minutes to respond to the Children's Attitudes Toward the Elderly (the CATE). The CATE asks a variety of short questions designed to show the child's concept of age and feelings toward the elderly. I would also ask both you and your spouse to take about 5 minutes to complete the short checklists enclosed.

To take part in the study, your child must have some "face-to-face" contact with a person approximately 65 years of age or older (for example, a neighbor, friend, or relative) and both a mother and father checklist must be completed.

If you are willing to have your child participate in the study, please complete the Parent Consent Form and the mother and father checklists and have your child return them to the teacher at school. If you have any questions, please feel free to contact me through the Child Development Department at Iowa State University (294-3040) or at my home (294-2381).

Thank you for your assistance.

Sincerely yours,

Karl Fernandes
Karl Fernandes, Researcher

Sam Clark
Samuel Clark, Major Professor
Head, Child Development Department
PARENT CONSENT FORM

I consent for my child to participate in a study concerning children's attitudes toward the elderly.

The nature and general purpose of the research procedure have been explained to me. I understand that any further inquiries I make concerning this procedure will be answered. I also understand that my child's identity will not be revealed. Finally, I understand that both I and my child are free to withdraw consent and discontinue participation at any time following the notification of the researcher.

Signed: ____________________________

Child's Name: _______________________
(PLEASE PRINT)

Please think of an elderly person (approximately 65 years of age or older) with whom your child has frequent personal contact. This person can be a neighbor, a friend, or a relative. In order to help in the testing, would you be able to provide me with the name your child knows this person by. This person's identity will be used only in the administration of the CATE and will not be revealed.

The name my child knows the elderly person by is:

_____________________________
(PLEASE PRINT)

My child has (please circle) daily weekly monthly contact with the elderly person above.

Karl Fernandes
(Researcher)
Samuel Clark
(Major Professor)
Dear Parents,

I am working on my doctoral degree in Child Development at Iowa State University. With more and more people living into a comparatively active and healthy old age, people's attitudes toward the elderly have become both an interesting and important issue. For my dissertation research, I plan to explore young children's understanding of aging and their attitudes toward the elderly. However, to meet this degree requirement, I need your help and that of your child.

In the near future (if you consent), while your child is attending kindergarten, I would like your child to take about 20 minutes to respond to the Children's Attitudes Toward the Elderly (the CATE). The CATE asks a variety of short questions designed to show the child's concept of age and feelings toward the elderly.

If you are willing to have your child participate in the study, please complete the Parent Consent Form (below) and have your child return it to the teacher at school. Children will be randomly selected from the group offering to participate, so please do not be concerned if your child is not chosen. If you have any questions, please feel free to contact me through the Child Development Department at Iowa State University (294-3040) or at my home (294-2381). Thank you for your assistance.

Sincerely yours,
Karl Fernandes, Researcher
Samuel Clark, Major Professor
Head, Child Development Dept.

---Parent Consent Form---

I consent for my child to participate in a study concerning children's attitudes toward the elderly. The general purpose and nature of the research procedure have been explained to me. I understand that any further inquiries I make concerning this procedure will be answered. I also understand that my child's identity will not be revealed. Finally, I understand that both I and my child are free to withdraw consent and discontinue participation at any time following the notification of the researcher.

Signed: ____________________________

Child's Name: ____________________ (PLEASE PRINT)

Karl Fernandes
APPENDIX C

THE REVISED
CHILDREN'S ATTITUDES TOWARD THE ELDERLY
THE CATE (REVISED)

Date: / / Time: _________ Child's Name: __________
Location: _________ I.D. No. _________ Birthday: / /
Mood: _________

PICTURE SERIES

Section 1: Directions: Photographs are shuffled and placed in RANDOM ORDER on the testing table.

1A. Which person do you think is oldest? 1 2 3 4
   Correct selection: Yes No
1A'. Why did you pick that one?

Directions: Photographs remain on the table. If the child has identified correctly in (1A)- photo #4- Examiner continues. If the child has failed to identify, Examiner points to #4.

1B. How will you feel when you are that old?

1C. (Pointing to oldest man) What things would YOU help this person do?

1D. (Pointing to oldest man) What things could HE help you do?

Section 2: Photographs remain on the table in random order.

2A. Would you please put these pictures in order from the youngest to the oldest for me?
   Child's order: _____ _____ _____ _____
   (Ability to order correctly) Yes No

Directions: Photographs are placed in PROPER SEQUENCE. Examiner points to the photographs, one at a time, in correct order.

2B. How old do you think each of these men are? (in years)
   Photo 1 (Youngest) _____
   Photo 2 (2nd Youngest) _____
Photo 3 (2nd Oldest)  
Photo 4 (Oldest)  

Section 3: Examiner indicates all four photographs.

3A. Which of these people would you MOST like to be with?

1 2 3 4

3A'. Why did you pick him?

3B. Examiner points to the photo chosen by the child (3A) and asks:

What kinds of things could you do with that person?

Could you go for walks? Yes No
Could you watch TV? Yes No
Could you fix a toy? Yes No

SEMANTIC DIFFERENTIAL

Trial item: RICH

<table>
<thead>
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<th>Nonpersonalized Elderly</th>
</tr>
</thead>
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<tr>
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</tr>
<tr>
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<td>GOOD 1 2 3 4</td>
</tr>
</tbody>
</table>

CONCEPT OF AGE

1A. Now we know that you are going to grow older every year, but will your father grow older? (Yes No) Will he stay the same age? (Yes No)

1B. Why do you think that?
2A. If someone is bigger than you, are they older than you?  
   (Yes No Sometimes)  
2B. Why do you say that?  

3A. If someone was born before you, will they always be older than you? (Yes No) Will you ever be the same age as them? (Yes No)  
3B. Why is that so?  

4A. Is your mother older than your grandmother? (Yes No)  
   Is your mother younger than your grandmother? (Yes No)  
   Are your mother and grandmother the same age? (Yes No)  
4B. Why do you say that?
APPENDIX D

THE REVISED
SEMANTIC DIFFERENTIAL FOR PARENT USE
Father's Checklist

I am interested in how an adult reacts to the concept "elderly person". For this reason, I am asking you to please complete the following checklist. As you do this, try not to think of any one person in particular. Consider each pair of words separately. There are no "right" or "wrong" responses.

First, decide which word in the pair best describes your reaction to the concept "elderly person" and then mark one of the spaces to show how strongly you feel it does.

<table>
<thead>
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<td>1</td>
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Thank You
Mother's Checklist

I am interested in how an adult reacts to the concept "elderly person". For this reason, I am asking you to please complete the following checklist. As you do this, try not to think of any one person in particular. Consider each pair of words separately. There are no "right" or "wrong" responses.

First, decide which word in the pair best describes your reaction to the concept "elderly person" and then mark one of the spaces to show how strongly you feel it does.

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<tr>
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<td>1</td>
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<tr>
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<td>PLEASANT</td>
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</table>

Thank You
APPENDIX E

THE ORIGINAL
CHILDREN'S ATTITUDES TOWARD THE ELDERLY
WORD ASSOCIATION

Section 1
What can you tell me about old people? Positive Negative
Frequency Count - Affective Responses
Physical Responses
Behavioral Responses

Section 2
What old people do you know?
Family: Yes No
Others: Yes No
What do you do with that person?
With-active: Yes No
With-passive: Yes No
For: Yes No

Section 3
Can you give me another name for old people?
Yes No

Section 4
How do you feel about getting old? Check one.
Positive
Neutral
Negative
PICTURE SERIES

Section 1

Directions: Photographs are shuffled and placed in random order on testing table.

A. Which person do you think is the oldest?
Response: (Ability to Identify) Yes No

Why?
Response: Evaluative Physical-descriptive

B. Photographs remain on table.

Directions: If child has identified correctly in (A), examiner continues.
If child has failed to identify, examiner points to photograph of oldest man.

How will you feel when you are that old?
Response: positive neutral negative

C. Directions: Examiner points to oldest person.

What things would you help this person do?
Response: affective behavioral stereotype behavioral unique

D. Directions: Examiner points to oldest person.

What things could he help you do?
Response: affective behavioral stereotype
Section 2

Directions: Photographs remain on testing table in random order.

A. Can you put these pictures in order from the youngest to the oldest?
Response: (Ability to order) yes no

Directions: Photographs are placed in proper sequence. Examiner points to photographs, one at a time in correct order.

B. How old do you think each of these men are? Record actual age.

Photograph 1 (Youngest)
Photograph 2 (2nd Youngest)
Photograph 3 (2nd Oldest)
Photograph 4 (Oldest)

Section 3

Directions: Examiner indicates all four photographs.

A. Which of these people would you prefer to be with?

1 2 3 4

Why? age-related altruistic evaluative

Directions: Examiner points to photograph chosen in 3 (A).

B. What kinds of things could you do with that person?
Response: with-active with-passive for
### Semantic Differential

#### Young People

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### SEMANTIC DIFFERENTIAL

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<td>Harmful</td>
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- Bad
- Happy
- Wrong
- Wonderful
- Ugly
- Friendly
- Dirty
- Rich
- Sick
- Helpful
THE CHILD'S CONCEPT OF AGE

1. You will grow older, but your father will stay the same age.
   Why?

2. Your mother and your grandmother are the same age.
   Why?

3. Your grandfather was born before your father.
   Why?

4. You and your mother are the same age.
   Why?

5. If someone was born first, then they are older than you.
   Why?

6. You were born before your teacher was born.
   Why?

7. Your grandmother grows older every year.
   Why?

8. If someone is bigger than you, then they are older than you.
   Why?

9. You grow older every year.
   Why?

10. If someone is five years older than you, they will always be five years older than you.
    Why?

11. Someone is two years older than you, but you will catch up to them and be the same age someday.
    Why?

12. How old were you when you were born?
    Why?
APPENDIX F

MANUAL TO ACCOMPANY THE REVISED
CHILDREN'S ATTITUDES TOWARD THE ELDERLY
THE GATE
Revised Edition

Introduction

The Children's Attitudes Toward the Elderly (the CATE), instrument was designed by Jantz, Seefeldt, Galper, and Serock (1976) to assess children's (ages 3 to 11 years) attitudes toward old people through analysis of the affective, behavioral and knowledge components of attitudes. From each component assessment items were constructed. In order to achieve both a balanced sample of items in the cognitive, affective and behavioral areas, and an instrument appropriate for use with children ages 3 to 11, four assessment techniques (subtests) were employed. Jantz et al. maintained that each subtest reveals a different, yet important, aspect of what the child knows about the elderly, what he feels toward them, and how he acts toward them.

In an effort to improve the CATE's assessment capabilities with a kindergarten age population, the original CATE was revised. The revised version of the CATE retains three of the four original subtests—Picture Series, Semantic Differential, and Concept of Age. The changes were deemed appropriate on the basis of theory and research (DiVesta, 1966; Inhelder, 1968; Piaget, 1965; 1969; Thorndike & Lorge, 1944) as well as the outcome of pilot observations with kindergar-
ten children.

Procedure

After establishing a rapport with the child, the examiner asks the child each question on a one-to-one basis. Each interview should be tape recorded to preserve the exact wording of the child's responses. However, the examiner should also try to record on the answer sheet (in the spaces provided) as much of the child's exact verbal response as possible, as well as any nonverbal actions or behaviors that may prove to be relevant to analysis. The child is administered the revised CATE subtests in the order of Picture Series, Semantic Differential, and Concept of Age. The ordering of the subtests was determined by the need to involve the child with the instrument immediately. The best way of accomplishing involvement with the revised CATE is through a concrete task (the Picture Series subtest) that the child can understand. After the child's initial involvement with the instrument is established, the child can then be presented a slightly more abstract task (the Semantic Differential subtest) before administering a completely abstract task (the Concept of Age subtest). Each child is allowed sufficient time to respond but generally 30 seconds without a response should lead to the next question. In addition to wait time, it is also important that the child respond voluntarily with-
out being prompted.

**Picture Series Subtest**

The Picture Series subtest assesses the child's attitudes toward the elderly by presenting concrete visual representations of older and younger people to elicit responses. Jantz et al. (1976) noted that the utility of a concrete pictorial representation with children was grounded in research which indicated that young children have difficulty in handling abstract verbal concepts. Various researchers have used pictures, drawings, and photographs as a means of eliciting attitudinal responses from samples of adults (e.g., Lawrence, 1974) and older children (e.g., Thomas & Yamamoto, 1975).

The materials for this subtest are four 8 x 10 inch drawings of a lone male figure at different stages of the life cycle. The drawings were prepared by a professional artist after consultation with experts on the physiology of aging (Jantz et al.). The drawings depict full face portraits of Caucasian males. Sex, race, dress, and facial expressions were held constant in order that subjects' response to the pictorial representations of the four life stages would be based on the single variable of age.

At the start of this subtest, the drawings are shuffled and placed in random order on the testing table. The exam-
iner then asks, "Which person do you think is oldest?". The number of the picture (1- youngest, 2- next-youngest, 3- next-oldest, 4- oldest) that the child selects is circled by the examiner and a "yes" is circled if the child selected Number 4; a "no", if the child has selected any other picture. The child is then asked, "Why did you pick that one?" and the examiner records his exact response.

If the child has identified the drawing correctly (that is, he has selected Number 4) the examiner continues. If, however, the child has failed to correctly identify the drawing of the oldest man, the examiner points to drawing Number 4 and asks the next three questions, "How will you feel when you are that old?", "What things could you help that person do?", and "What things could he help you do?". In each case, the child's exact response is recorded.

The next section of this subtest starts with the drawings still in random order on the table. The child is asked, "Would you please put these pictures in order for me from the youngest to the oldest?". The examiner should record the child's order using the 1 through 4 numbering sequence discussed above. If the child succeeds in a 1, 2, 3, 4 ordering, the examiner circles the "yes" next to correct on the answer sheet. A "no" is circled for any other ordering (including a no response) that the child may achieve.
If the child fails to place the drawings in the proper sequence, the examiner does so, and while pointing to each drawing one at a time asks, "How old do you think this man is?". The examiner then records each child's exact age estimate for that drawing in the space provided. The examiner should be sure that the child gives his answer in years (responses like "He's young" or "He's old" should not be accepted). If the child has difficulty in understanding the tasks, or if the child appears to be shy, the examiner should use the following example: "Well, if someone asked me to guess your age, I would say you're...oh, 6-years-old. Now, if you had to guess this man's age (pointing to the first drawing) how old would you say he is (in years)?"

For the final section of the Picture Series subtest, the examiner indicates to the child that the child is to consider all four pictures and then asks, "Now if you can only be with one of these men, which one of these people would you most like to be with?" circling the number corresponding to the child's choice. The child is then asked, "Why did you pick him?" and the child's exact response is recorded. Finally, the child is asked to indicate, "What kinds of things could you do with that person?" and the child's exact response is recorded. If the child fails to respond to this question, the three item probe (Could you go for walks? Could you watch TV? Could you fix a toy?) should be administered.
Semantic Differential Subtest

The second subtest, a Semantic Differential (SD), employs a 10-item, four-point uni-polar scale on the Evaluative dimension of attitudes. In assessing attitudes toward the elderly, the SD has been successfully used in various research investigations (e.g., Rosencranz & McNevin, 1969; Seltzer & Atchley, 1971; Thomas & Yamamoto, 1975). Although most of the studies using the SD have tested subjects above the high school level, Thomas and Yamamoto found a SD to be of value in determining the attitudes of older children in grades 5, 7, 9, and 11. The SD in the revised CATE measures the child's attitudes toward the two concepts of "personalized elderly" and "nonpersonalized elderly".

It was evident from the initial wave of pilot observations that the bi-polar SD used in the original CATE proved to be unclear to the young subjects. Subjects tended to respond only to the extremes of the scale. A uni-polar format, using only the positive adjective pair was indicated. Subsequent piloting with the uni-polar format produced greater gradation of children's responses. The uni-polar adjectives used in the subtest were selected for two reasons. First, the uni-polar adjectives are taken from the Evaluative factor of the SD. The Evaluative factor "accounts for the largest part of the total variance in comparison to other factors"
(Jantz et al., 1976, p. 10). It has also been determined (DiVesta, 1966) that the dominant dimension affecting children's ratings of various concepts is the Evaluative factor. Second, the evaluative adjectives obtained high factor loadings through investigations by DiVesta on how children in grades two through seven rated more than 100 concepts (e.g., Mother, Father, Me). Moreover, the revised form developed for the present study, was limited to the 3,000 most common words in the English language (as determined by Thorndike & Lorge, 1944) and it incorporated adjectives representative of previous investigations (DiVesta, 1966; Rosencranz & McNevin, 1969; Thomas & Yamamoto, 1975).

In an effort to guard against subject response set, two preventative measures are taken in the administration of the SD in the revised CATE. First, the order of the scales is rotated so that an adjective presented early on one concept is administered later on the other. Second, the concept sequence is randomly rotated so that half the subjects respond to the concept of "personalized elderly" first; "nonpersonalized elderly" second. The remainder of the subjects are presented the concept of "nonpersonalized elderly" first; "personalized elderly" second.

For this subtest, the examiner uses a mat (Figure 1). The mat is divided into four 5 x 5 inch squares. A "circle friend" is drawn in each square. The mat should be of one
one color (e.g., yellow) to prevent subject response set to a preferred color and the "circle friend" should be of a contrasting color (e.g., black) and large enough (at least a 3½ inch diameter) for the child to easily perceive. The four "circle friends" each represent a different attitude or rating of the evaluative adjective on the concepts. The "blank face" (a circle with two eyes) represents complete disagreement with the adjective, the "plain face" (a circle with two eyes and a straight mouth) represents slight disagreement with the adjective, the "small-smiling face" (a circle with two eyes and a small smile) represents slight agreement with the adjective, and the "big-smiling face" (a circle with two eyes and a big smile) represents complete agreement with the adjective.

The mat is placed directly in front of the child on the testing table so that each square is approximately equidistant from the child. This is necessary in order to prevent the child from merely responding to the closest square. The
instructions to the child are as follows:

Now what's happened is that boys and girls have given me a list of words that they tell me describe old people. Some of these words may do a better job of describing what old people are like than others, so we have our four little "circle friends" here (examiner shows child the mat). If you think the word does a really good job of telling us what old people are like then you point to our "big-smiling face" here (pointing to it on the board). He's smiling because he thinks old people are like that an awful lot. If you think the word is kinda like old people, but not an awful lot like them, then you would point to our "small-smiling face" (pointing to it) because he thinks old people are kinda like the word. Our "plain face" here (pointing to it) well, he thinks old people are like the word but just a very little bit (gesturing with two fingers about an inch apart). So if you feel like that you would point to him. Our last circle friend (pointing to it) well, I call him our "blank face". He won't smile for us because he thinks old people aren't like that word at all! If you feel that way too, then you'll want to point to him.

So, if you think old people aren't like the word at all, you point to our "blank face" (pointing to it), if you think old people are like that just a real little bit, then you'd point to our "plain face" (pointing to it), if you think old people are sort of like that, then you'd point
to our "small-smiling face" (pointing to it), and if you think old people are really like that an awful lot, then you'd point to our "big-smiling face" (pointing to it).

So all you have to do is point to the little "circle friend" that feels like you do about the word. Okay? Do you know how we play the game now?

After the child indicates that he understands the instructions, the examiner presents the child with the trial item, RICH. Following the presentation of the trial item (which is given to the child to be sure he understands the task) the examiner proceeds through the lists so that the child completes two semantic differentials (one on the concept of "personalized elderly" and the other on the concept of "nonpersonalized elderly"). The examiner checks the number of the circle friend the child points to (1- blank face, 2- plain face, 3- small-smiling face, 4- big-smiling face) on the test sheet.

To test the concept of "personalized elderly", the examiner uses the name of the elderly person the child has contact with and was provided to the examiner by the parents on the parent consent form. For this presentation (the personalized elderly), the child is asked to respond to the semantic differential keeping in mind the person whose name the parents have provided.
Concept of Age Subtest

The conviction that there is a strong cognitive-develop­
mental factor in children's understanding of age concepts led
to the development of the Concept of Age subtest. Jantz et
al. (1976) based the subtest on Piagetian Theory (Piaget,
1969). However, there have been few other attempts to devel­
op measurement techniques and procedures to assess the rele­
vancy of Piagetian Theory applied to children's concepts of
age.

The Concept of Age subtest gives an indication of the
child's level of cognitive development with regard to age con­
cepts. The form of the subtest used in the revised CATE rep­
resents what the author views as a refinement of the original
version designed by Jantz et al. (1976). Rather than using
repetitious questions, this subtest has been streamlined from
the original 12 questions to include just four problems. How­
ever, these four problems reflect the major areas originally
posed by Piaget (1969):

1. Does the child look upon aging as a continuous proc­
   ess in time? Is this process the same for all in­
dividuals?

2. Does the child associate age differences with birth
   order? This involves the relationship between du­
   ration (age itself) and succession (or the seria-
tion of births).

3. Is age (time) associated with size of height (space), and not viewed as a continuum in its own right?

4. Does the child understand that age differences are maintained throughout life?

The subtest on the child's Concept of Age is introduced by a statement such as, "Now I will ask you some puzzle-type questions". The subtest is administered as an individual interview in which the child is asked to respond to a yes or no type question by the examiner and is then quizzed as to why he responded as he did.

The examiner begins this subtest by asking the question, "Now we know that you are going to grow older every year, but will your father grow older?" The examiner circles "yes" if the child says yes; "no" if the child says no. The second part of the question is then given, "will he (the father) stay the same age"? Again, the examiner circles either "yes" or "no" depending on the child's response. If the child fails to understand the question, the examiner may repeat it (but not rephrase it). After the child responds to this first question, the examiner asks, "Why do you think that?" If the child's response is a nonsense, inappropriate, or no response (e.g., "I don't know", "My daddy's nice"), the examiner will record the exact response and make the notation N/R (for no response). The examiner should feel free to
further probe any response the child may make if any question about its meaning exists in the mind of the examiner.

The next question, "If someone is bigger than you, are they older than you?" is asked. The examiner records whether the child agrees ("yes"), disagrees ("no"), or responds conditionally ("sometimes"). The examiner should then probe the child's response by asking, "Why do you say that?" and recording the child's exact response.

The subtest continues with the question, "If someone was born before you, will they always be older than you? (yes no) will you ever be the same age as them?" (yes no). The child is then quizzed by the examiner as to, "Why is that so?" and the child's exact response is recorded.

The final question, "Is your mother older than your grandmother? (yes no) Is your mother younger than your grandmother? (yes no) Are your mother and grandmother the same age?" (yes no), is presented in a similar fashion. The child's answer is then probed by the examiner who records the child's exact response.

Upon completion of the revised CATE, the child is allowed to hear himself on the tape recorder (usually the last part of the Concept of Age subtest), thanked for his help, and escorted back to his classroom. The actual testing time for the revised CATE is approximately 15 minutes.
Scoring

In an effort to control a threat to the internal validity of the study, all subjective items should be scored by at least two trained, independent judges who are "blind" to the objectives of the study. However, all objective items, such as the child's responses to the semantic differentials, which can be directly recorded and scored from the child's responses, may be scored by the examiner during the administration of the revised CATE. Items which may be directly scored by the examiner during the testing, will be proceeded by an asterisk (*) in the discussion of the scoring procedures.

The scoring protocols for the test items are consistently in the direction of lowest to highest. Depending on the nature of the question, the lowest scored response represents either the most immature response or the most unfavorable response toward the elderly the child could make. The response category "no response" (or N/R) is used to represent unrelated responses, inappropriate responses, or no responses. The N/R response is the lowest scored category for several of the items. The no response is viewed as the most immature response the child can make because no information is provided. By assuming the no response to be the most unfavorable response toward the elderly the child can make, the examiner is working against finding favorable attitudes toward the elder-
ly in children. An examiner who finds favorable attitudes toward the elderly in children using these protocols can accept the fact that they are favorable. However, an examiner who discovers unfavorable attitudes toward the elderly in children using these protocols needs to scrutinize the data to be certain that the outcome is not artificially influenced by a large number of no responses.

**Picture Series Subtest**

The Picture Series subtest assesses the children's attitudes toward the elderly when presented with concrete examples of older and younger people. This subtest is scored as follows:

*1A. Which person is oldest?*

This item is scored by the examiner according to the child's response.

*Yes- if the child selects #4.*

*No - if the child selects 1, 2, 3, or does not respond.*

1A'. Why did you pick that one?

Each response by the child can fall into one of three categories:

1. **No response (N/R)** no response, an unrelated response, or I don't know.

2. **Physical/Descriptive (P/)** responses of this type would specifically relate to observable physical
traits (e.g., gray hair, wrinkles, etc...).

3. **Evaluative/Affective (E/Af)** a response is considered evaluative/affective if it refers to opinions or judgments, as made by the child (e.g., he's mean, nice, sad...).

The child is classified according to his most frequent response category.

1B. How will you feel when you are that old?

   Each response by the child can fall into one of four categories:
   1. **No response (N/R)** no response, unrelated response, or I don't know.
   2. **Negative (Neg)** (e.g., sad, mad, bad)
   3. **Neutral (O)** (e.g., okay, about the same, old)
   4. **Positive (Pos)** (e.g., good, happy)

The child is classified according to his most frequent response category.

1C. What things would you help this person do?

   Each response by the child can fall into one of three categories:
   1. **No response (N/R)** no response, unrelated response, or I don't know.
   2. **Behavioral/stereotype (B/S)** responses implying that the older person needs a great amount of help because of his age (e.g., help him walk, help him
cross the street, take care of him).

3. Affective (Af/) responses pertaining to feelings or emotions (e.g., I'd be nice to him, love him).

The child is classified according to his most frequent response category.

1D. What things could he help you do?

This item is scored according to the procedures and categories for 1C of this subtest:

1. No response (N/R)
2. Behavioral/stereotype (B/S)
3. Affective (Af/)

The child is classified according to his most frequent response category.

*2A. Can you put these pictures in order from youngest to oldest?

This item is scored by the examiner according to the child's responses. The child's order is recorded using the 1 through 4 numbering sequence of the pictures. The examiner then scores:

Yes- for an ordering of 1, 2, 3, 4.
No - for any other type of ordering or a no response.

*2B. How old do you think these men are? (in years)

This item is scored by the examiner according to the child's responses. The exact age estimates are recorded by the examiner according to the child's responses.
*3A. Which of these people would you most like to be with? This item is scored by the examiner according to the child's responses. The examiner circles the number of the drawing selected by the child.

3A'. Why did you pick him?

Each response by the child can fall into one of four categories:

1. No response (N/R) no response, unrelated response, or I don't know.
2. Age-Related (A-R) any response specifically referring to age (e.g., he's older, he's younger).
3. Evaluative (E/) responses referring to opinions or judgments (e.g., I chose him because he's nice, he looks like my Daddy, he's like Grandpa).
4. Altruistic (Al) responses suggesting unselfish motivations and having the older person's interests in mind (e.g., He needs help, We should take care of him).

The child is classified according to his most frequent response category.

3B. What things could you do with that person?

Each response by the child can fall into one of three categories:

1. No response (N/R) no response, unrelated response, or I don't know.
2. **With (W/)** responses indicating joint participation of a moving, active nature or a quiet, passive nature (e.g., playing catch, going for walks, talking, watching T.V.).

3. **For (F/)** responses that portray either the subject, or the older person as doing something for the other person (e.g., fixing a toy, bringing in firewood).

The child is classified according to his most frequent response category. In the event of a brief response or an I don't know response, the probe sequence was administered:

- Could you go for walks (with him)? yes no
- Could you watch T.V. (with him)? yes no
- Could you fix a toy (with him)? yes no

If the first two probe statements are scored as "yes", the child would be classified as a "With" (W/). The probe should be used in scoring only if the examiner or scorer feels the child's response was insufficient.

**Semantic Differential Subtest**

The Semantic Differential subtest is used as a measure of the child's attitudes toward the concepts of "personalized elderly" and "nonpersonalized elderly". Each scale item has a range of four points and the score for each scale item can be 1 to 4. Scoring the Semantic Differential yields means
and standard deviations on the total score (range 10 to 40) for the concepts "personalized elderly" and "nonpersonalized elderly" as well as means and standard deviations on item scores. Each subject rates both concepts on the ten items, giving each item a score.

*This entire subtest is scored by the examiner according to the child's responses.

Concept of Age Subtest

The Concept of Age subtest gives an indication of the child's level of cognitive development with regard to age concepts. This subtest is scored as follows:

*1A. Now we know that you are going to get older every year, but will your father grow older? (yes no) will he stay the same age? (yes no)

This item is scored by the examiner according to the child's responses. The examiner will circle either a yes, a no, or mark N/R for no response.

1B. Why do you think that?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if aging is not seen as a continuous process (e.g., He still looks the same).
2 Pts. if the child's response indicates that age changes are related to birth dates or if age is seen as a continual process (e.g., Because he has birthdays, He'll get older, Everyone gets older and older).

*2A. If someone is bigger than you, are they older than you? (yes no sometimes)

This item is scored by the examiner according to the child's response. The examiner will circle either a yes, a no, a sometimes, or mark N/R for no response.

2B. Why do you say that?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if the child equates age with size (e.g., I'll be bigger when I'm older).

2 Pts. if the response shows that the child understands age is not related to growth in height (e.g., If they were born first, then they'd be older).

*3A. If someone was born before you, will they always be older than you? (yes no) will you ever be the same age as them? (yes no)

This item is scored by the examiner according to the child's responses. The examiner will circle either a yes, a no, or mark N/R for no response.
3B. Why is that so?
The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if the response suggests that the child does not see age differences being maintained throughout life (e.g., I'll be 8 and catch-up, They were born before me so they'd be younger (than me)).

2 Pts. if responses reflect the belief that age differences are maintained, even if the child does not necessarily feel they depend on birth order (e.g., If they were born first, then they'd be older, They were born before I was).

*4A. Is your mother older than your grandmother? (yes no)
Is your mother younger than your grandmother? (yes no)
Are your mother and grandmother the same age? (yes no)

This item is scored by the examiner according to the child's responses. The examiner will circle either a yes, a no, or mark N/R for no response.

4B. Why do you say that?
The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.
1 Pt. if the response reveals a lack of understanding of birth order (e.g., They're as big as each other, My mom's old, My grandma's fatter).

2 Pts. if the response reveals an awareness that age differences exist, regardless of whether or not they are associated with birth order (e.g., They weren't born at the same time, My mom's young and my grandma's old).
Introduction

The Children's Attitudes Toward the Elderly (the CATE), instrument was designed by Jantz, Seefeldt, Galper, and Serock (1976) to assess children's (ages 3 to 11 years) attitudes toward old people through analysis of the affective, behavioral and knowledge components of attitudes. From each component assessment items were constructed. In order to achieve both a balanced sample of items in the cognitive, affective and behavioral areas, and an instrument appropriate for use with children ages 3 to 11, four assessment techniques (subtests) were employed. Jantz et al. maintained that each subtest reveals a different, yet important, aspect of what the child knows about the elderly, what he feels toward them, and how he acts toward them.

In an effort to improve the CATE's assessment capabilities with a kindergarten age population, the original CATE was revised. The revised version of the CATE retains three of the four original subtests- Picture Series, Semantic Differential, and Concept of Age. The changes were deemed appropriate on the basis of theory and research (DiVesta, 1966; Inhelder, 1968; Piaget, 1965; 1969; Thorndike & Lorge, 1944) as well as the outcome of pilot observations with kindergarten children.
The scoring protocols for the test items are consistently in the direction of lowest to highest. Depending on the nature of the question, the lowest scored response represents either the most immature response or the most unfavorable response toward the elderly the child could make. The response category "no response" (or N/R) is used to represent unrelated responses, inappropriate responses, or no responses. The N/R response is the lowest scored category for several of the items. The no response is viewed as the most immature response the child can make because no information is provided.

**Picture Series Subtest**

The Picture Series subtest assesses the children's attitudes toward the elderly when presented with concrete examples of older and younger people. This subtest is scored as follows:

1A'. Why did you pick that one?

Each response by the child can fall into one of three categories:

1. **No response (N/R)** no response, an unrelated response, or I don't know.

2. **Physical/Descriptive (P/)** responses of this type would specifically relate to observable physical traits (e.g., gray hair, wrinkles, looks older).
3. **Evaluative/Affective (E/Af)** a response is considered evaluative/affective if it refers to opinions or judgments, as made by the child, about the oldest man (e.g., he's mean, he's nice, he's sad).

The child is classified according to his most frequent response category.

1B. How will you feel when you are that old?

Each response by the child can fall into one of four categories:

1. **No response (N/R)** no response, unrelated response, or I don't know.

2. **Negative (Neg)** (e.g., sad, mad, bad)

3. **Neutral (O)** (e.g., okay, about the same, old)

4. **Positive (Pos)** (e.g., good, happy)

The child is classified according to his most frequent response category.

1C. What things would you help this person do?

Each response by the child can fall into one of three categories:

1. **No response (N/R)** no response, unrelated response, or I don't know.

2. **Behavioral/Stereotype (B/S)** responses implying that the older person needs a great amount of help because of his age (e.g., help him walk, help him cross the street, take care of him).
3. **Affective (Af/)** responses pertaining to feelings or emotions (e.g., I'd be nice to him, love him).

The child is classified according to his most frequent response category.

1D. What things could he help you do?

This item is scored according to the procedures and categories for 1C of this subtest:

1. **No response** (N/R)
2. **Behavioral/Stereotype (B/S)**
3. **Affective (Af/)**

The child is classified according to his most frequent response category.

3A'. Why did you pick him? (picked #____)

Each response by the child can fall into one of four categories:

1. **No response** (N/R) no response, unrelated response, or I don't know.
2. **Age-Related (A-R)** any response specifically referring to age (e.g., he's older, he's younger).
3. **Evaluative (E/)** responses referring to opinions or judgments (e.g., I chose him because he's nice, he needs help, we should take care
of him).

The child is classified according to his most frequent response category.

3B. What things could you do with that person?

Each response by the child can fall into one of three categories:

1. **No response (N/R)** no response, unrelated response, or I don't know.

2. **With (W/)** responses indicating joint participation of a moving, active nature or a quiet, passive nature (e.g., playing catch, going for walks, talking, watching T.V.).

3. **For (F/)** responses that portray either the subject, or the older person doing something for the other person (e.g., fixing a toy, bringing in firewood).

The child is classified according to his most frequent response category. In the event of a brief response or an I don't know response, the probe sequence was administered:

- Could you go for walks? (with him) yes no
- Could you watch T.V.? (with him) yes no
- Could you fix a toy? (with him) yes no

If the first two probe statements are scored as "yes", the child should be classified as a "With" (W/). The probe should be used in scoring only if the examiner or scorer feels the child's response was insufficient.
Semantic Differential Subtest

The Semantic Differential subtest is used as a measure of the child's attitudes toward the concepts of "personalized elderly" and "nonpersonalized elderly". This entire subtest is scored by the examiner according to the child's responses during the administration of the revised CATE.

Concept of Age Subtest

The Concept of Age subtest gives an indication of the child's level of cognitive development with regard to age concepts. The subtest is scored as follows:

1B. Why do you think that?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if aging is not seen as a continuous process (e.g., He still looks the same).

2 Pts. if the child's response indicates that age changes are related to birth dates or if age is seen as a continual process (e.g., Because he has birthdays, He'll get older, Everyone gets older and older).

2B. Why do you say that?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't
know.

1 Pt. if the child equates age with size (e.g., I'll be bigger when I'm older).

2 Pts. if the response shows that the child understands age is not related to growth in height (e.g., If they were born first, then they'd be older).

3B. Why is that so?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if the response suggests that the child does not see age differences being maintained throughout life (e.g., I'll be 8 and catch-up, They were born before me so they'd be younger (than me)).

2 Pts. if responses reflect the belief that age differences are maintained, even if the child does not necessarily feel they depend on birth order (e.g., If they were born first, then they'd be older, They were born before I was).

4B. Why do you say that?

The child's reasoning is scored as follows:

0 Pts. for no response, unrelated response, or I don't know.

1 Pt. if the response reveals a lack of understanding of birth order (e.g., They're as big as each
2 Pts. if the response reveals an awareness that age differences exist, regardless of whether or not they are associated with birth order (e.g., They weren't born at the same time, My mom's young and my grandma's old, Grandma's mom's mom).

Concluding Comments

First, it is recommended that the judge score all subjects on one subtest first and then go back and score all subjects on the other subtest. In that way, the judge will only have to concentrate on one set of protocols at a time.

Second, always classify the child according to his most frequent response. In the case of a tie between two or more response categories, break the tie as follows:

A) if the child goes into more depth/detail in responding to one category than the other(s), select that more detailed category as the child's dominant response category;

B) if the child goes into equal depth/detail in two or more response categories while responding to an item, accept the first response category to appear as the dominant one.
APPENDIX H

CODING OF
CHILDREN'S ATTITUDES TOWARD THE ELDERLY
RESPONSES
<table>
<thead>
<tr>
<th>Column (Card I)</th>
<th>Description</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Card number</td>
<td></td>
</tr>
<tr>
<td>2,3</td>
<td>Subject number</td>
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</tr>
<tr>
<td>4</td>
<td>Sex of child</td>
<td>1 = male</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = female</td>
</tr>
<tr>
<td>5,6</td>
<td>Age of child</td>
<td>In months</td>
</tr>
<tr>
<td>7</td>
<td>Contact with elderly</td>
<td>1 = monthly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = weekly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = daily</td>
</tr>
<tr>
<td>8-30</td>
<td>Picture Series</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Ability to recognize oldest man (IA)</td>
<td>1 = no</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = yes</td>
</tr>
<tr>
<td>9,10</td>
<td>Basis of age recognition (IA')</td>
<td>1 = no response</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = physical/ descriptive</td>
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<tr>
<td></td>
<td></td>
<td>3 = evaluative/ affective</td>
</tr>
<tr>
<td>9</td>
<td>Judge I</td>
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<tr>
<td>10</td>
<td>Judge II</td>
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</tr>
<tr>
<td>11,12</td>
<td>Feelings about getting old (IB)</td>
<td>1 = no response</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = neutral</td>
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<td>4 = positive</td>
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<td>11</td>
<td>Judge I</td>
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<td>12</td>
<td>Judge II</td>
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</tr>
<tr>
<td>13,14</td>
<td>Ways child could help oldest man (IC)</td>
<td>1 = no response</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = behavioral/ stereotype</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = affective</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
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<td>13</td>
<td>Judge I</td>
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<td>14</td>
<td>Judge II</td>
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<td>15,16</td>
<td>Ways oldest man could help child (1D)</td>
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<td></td>
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<td>2 = behavioral/</td>
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<td>15</td>
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<td>16</td>
<td>Judge II</td>
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<tr>
<td>17</td>
<td>Ability to seriate pictures by age (2A)</td>
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<td></td>
<td></td>
<td>2 = yes</td>
</tr>
<tr>
<td>18-25</td>
<td>Age estimates (2B)</td>
<td>In years (00-99)</td>
</tr>
<tr>
<td>18,19</td>
<td>Youngest man</td>
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<tr>
<td>20,21</td>
<td>Next-youngest man</td>
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<td>22,23</td>
<td>Next-oldest man</td>
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<tr>
<td>24,25</td>
<td>Oldest man</td>
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</tr>
<tr>
<td>26</td>
<td>Associational preference (3A)</td>
<td>1 = youngest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = next-youngest</td>
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<tr>
<td></td>
<td></td>
<td>3 = next-oldest</td>
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<td></td>
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<td>4 = oldest</td>
</tr>
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<td>27,28</td>
<td>Reason for associational preference (3A')</td>
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<tr>
<td></td>
<td></td>
<td>2 = age-related</td>
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<td>3 = evaluative</td>
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<td></td>
<td></td>
<td>4 = altruistic</td>
</tr>
<tr>
<td>27</td>
<td>Judge I</td>
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<td>Judge II</td>
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<td>Types of shared activities (3B)</td>
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<td></td>
<td></td>
<td>2 = with</td>
</tr>
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<td></td>
<td></td>
<td>3 = for</td>
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<td>29</td>
<td>Judge I</td>
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</tr>
<tr>
<td>31-70</td>
<td>Semantic differential</td>
<td>1 = unfavorable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = slightly unfavorable</td>
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<tr>
<td></td>
<td></td>
<td>3 = slightly favorable</td>
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<tr>
<td></td>
<td></td>
<td>4 = favorable</td>
</tr>
<tr>
<td>31-40</td>
<td>Child's responses to personalized elderly</td>
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<tr>
<td>41-50</td>
<td>Child's responses to nonpersonalized elderly (NPE)</td>
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<td>51-60</td>
<td>Father's responses to NPE</td>
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<tr>
<td>61-70</td>
<td>Mother's responses to NPE</td>
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<td>71-80</td>
<td>Concept of Age</td>
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<td>Aging as a continuous process (1A)</td>
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<td>1 = alternate</td>
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<td>2 = yes-no</td>
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<td>72,73</td>
<td>Reasoning (1B)</td>
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<td>1 = transition</td>
</tr>
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<td></td>
<td>2 = conservation</td>
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<td>72</td>
<td>Judge I</td>
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<td>73</td>
<td>Judge II</td>
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<td>74</td>
<td>Separation of age differences (2A)</td>
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<tr>
<td></td>
<td></td>
<td>1 = yes or no</td>
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<tr>
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<td>2 = sometimes</td>
</tr>
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<td>75,76</td>
<td>Reasoning (2B)</td>
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<td>1 = transition</td>
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<td></td>
<td></td>
<td>2 = conservation</td>
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<td>75</td>
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<td>Maintenance of age differences (3A)</td>
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<tr>
<td>78,79</td>
<td>Reasoning (3B)</td>
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<td>Birth order/Age differences (4A)</td>
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<td>(Card II)</td>
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<td>Base data</td>
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<td>Concept of Age (Continued)</td>
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</tr>
<tr>
<td>9</td>
<td>Judge II</td>
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</tr>
</tbody>
</table>

Coding:
- 0 = no response
- 1 = alternate
- 2 = yes-no
- 0 = no response
- 1 = transition
- 2 = conservation
- 0 = no response
- 1 = alternate
- 2 = no-yes-no