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THE MULTIDIMENSIONAL MODEL OF ATTITUDES TO OLD AGE:  
AN INVESTIGATION BASED ON ATTRIBUTION THEORY

A thesis presented in partial fulfilment of  
the requirements for the degree of  
Master of Science in Psychology  
at Massey University

Anthea Maureen Counsell

1990

## ABSTRACT.

The multidimensional model proposes that both positive and negative attitudes toward older people exist across different dimensions. In the present study, academic and wisdom tasks were examined in an investigation of the dimension of type of task. The influence of contact with older people on attitudes toward them was also examined. In a between-subjects experimental design, university students ( $N = 296$ ) read a description of an academic or wisdom task to be performed by a young or an old woman, and rated their expectancy of the woman's success. They were then told that the woman had succeeded or failed, and were asked how much her performance was due to age, and to Weiner-model causal elements. Both positive and negative attitudes toward older people were apparent. On the academic task the older woman's success was attributed to age where success was expected and to luck where success was unexpected. The younger woman's failure was attributed more to effort than was failure of the older woman while failure of the older woman was attributed more to age than was failure of the younger woman. Contact with older people had little effect on attitudes toward them. The implications of these findings for the multidimensional model and recommendations for future research are discussed.

## ACKNOWLEDGEMENTS.

I would like to sincerely thank my supervisors, Keith Tuffin and Helen Pennington, for their unending support, guidance, and encouragement in this research. My thanks also to the many people who assisted me during the year especially Dr. John Spicer, Harvey Jones, and the Computer Centre Consultants (Glenda Shaw, Giovanni Moretti, and Allan Burton). Thank you to the students who responded to my questionnaire and to Dr. Dave Clarke for his assistance with data collection. Finally, I am very grateful for the support and help from friends and family throughout this thesis.

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## **CHAPTER ONE:**

### **ATTITUDES TOWARD OLDER PEOPLE.**

Research into ageing has been stimulated by the ageing of Western populations. With an increasing proportion of older people (Demographic Trends, 1988) it has become more important to examine the way this group is perceived. The perception of older people as a group influences the behaviour both of and toward them.

After defining attitudes and related terms, this chapter reviews the literature on attitudes toward older people, which has suggested that negative attitudes exist. The chapter also reviews recent studies which have suggested that these negative attitudes are less prevalent than previously thought and discusses the possibility that these findings partly reflect more contact with older people. The limitations of previous research in terms of interpretation and measurement problems are reviewed. It is argued that the recent findings support a multidimensional model where negative views of older people are held on particular dimensions, whereas positive views are held on other dimensions.

#### **DEFINITION OF ATTITUDES AND RELATED TERMS:**

An attitude is a stable and enduring disposition to evaluate an object in a specific way (Baum, Fisher, & Singer, 1985). Typically, attitudes have been seen as having three components: (a) the affective component involves feelings toward an object; (b) the cognitive component refers to beliefs about an object, which may be correct or incorrect; and (c) the conative component involves behaviours or actions

toward an object (Myers, 1987). Generally, components are consistent, for example, positive feelings toward older people will be accompanied by positive beliefs about and positive behaviour toward older people.

Stereotype is a term that has often been associated with attitudes. Stereotyping is a form of generalization which involves the name of some group of people and statements about that group (Brislin, 1984). Brislin defined stereotypes as any categorization of individual elements concerned with people that masks differences among those elements. They are necessary for thinking and communicating about a lot of isolated elements perceived each day. The elements are grouped into categories and then responses are made to these categories. Therefore, when we speak of "older people" we are using a stereotypical category that masks individual differences within that category.

The term most commonly associated with attitudes toward older people has been ageism. Ageism has been defined as the attitudes and stereotypes relating to older people that are devaluative (Gatz & Pearson, 1988). Butler (1975) coined the term and defined it as systematic negative attitudes toward and discrimination against old people. He identified three separate but related facets of ageism: (a) negative attitudes to ageing and the aged, (b) discrimination against older people in various social roles including employment, and (c) reinforcement of negative attitudes through the policies and practices of institutions. Butler (1980) saw these aspects as interrelated and mutually supportive of each other and commented that because of ageism, ageing has become a social problem with negative results rather than a natural process.

Most definitions of ageism have stressed negative attitudes toward older people. However, Schonfield (1982) defined ageism as prejudice toward a particular age group reflected through attitudes with both positive and negative aspects. Such prejudice is seen in behaviour toward the group in line with stereotypes. Schonfield's inclusion of positive aspects of attitudes in this definition of ageism resulted from literature reviews that questioned the overwhelming negative view of older people (Brubaker & Powers, 1976; McTavish, 1971); the finding that older people were not alienated from their families (Shanis, 1979); the evidence for some decline in negative stereotypes of older people (Tibbitts, 1979); and the suggestion of oversensitivity by gerontologists to negative stereotypes of old age (Seltzer & Atchley, 1971).

Ageism in the usual sense has been seen in many forms, among professionals such as psychotherapists (Ford & Sbordone, 1980) and clinicians (Goodstein, 1985). Ageism has also been noted in various media: television (Gerbner, Gross, Signorielli, & Morgan, 1980); advertising (Gantz, Gartenberg, & Rainbow, 1980); and music (Leitner, 1982).

Thus attitudes represent the disposition to evaluate an object in a specific way and consist of affective, cognitive, and conative components. Stereotypes are generalizations about a group. The term ageism has been used to describe attitudes relating to particular age groups, usually referring to negative attitudes toward older people.

## ATTITUDES TOWARD OLDER PEOPLE:

The interest in attitudes toward older people was a result of the recognition of the importance of attitudes in the social environment and the conflict over the nature of attitudes toward older people (Wingard, Heath, & Himelstein, 1982). Two literature reviews (Bennett & Eckman, 1973; McTavish, 1971) summarized the research of the 1950s and 1960s. The majority of early research involved surveys and questionnaires and suggested that attitudes toward older people were negative.

Bennett and Eckman (1973) noted that most studies used cross-sectional or descriptive survey designs. They concluded that both young and old age groups held negative attitudes toward older people. For example, Tuckman and Lorge (1952) pioneered comprehensive research in the area. Using a questionnaire they studied negative attitudes and common misconceptions of older people among a range of age groups. They found that negative attitudes toward old age existed. Axelrod and Eisdorfer (1961) examined five stimulus age groups (35, 45, 55, 65, and 75 years), rather than the single over 35 years stimulus age group used by Tuckman and Lorge, and found an increase in negative stereotypes in older stimulus age groups. The descriptive survey studies have also found negative attitudes toward older people. For example, Kuhlen (1959) and Riegel and Riegel (1960) found that negative views of old age were held by old people. Arnhoff, Leon, and Lorge (1964) found negative stereotypes of older people in the United States and in other countries.

McTavish (1971) noted the emphasis on negative and erroneous views of older

people in research of the 1950s and the 1960s. He reviewed the literature on attitudes toward older people at two levels, societal and individual. The societal level studies involved participant observation and cross-cultural interviews. The findings of the societal level studies suggested that there was an increase in negative attitudes as societies became more industrialized. The individual level studies involved Likert and semantic differential scales. Results of the individual level studies suggested that there were some negative stereotypes of older people such as tired, ill, mentally slower, forgetful, withdrawn, isolated, and unproductive. Thus early studies, involving surveys and questionnaires, suggested that attitudes toward older people were negative.

In a move away from past methods of rating traits in surveys and questionnaires, current research is more ecologically valid or relevant to the situation of older people themselves. The experimental designs employed have usually involved descriptions of a young or an old person in a particular situation with expectations of success (Reno, 1979) or attributions as the dependent variables (Banziger & Drevenstedt, 1982; Erber, Szuchman, & Rothberg, 1990; Lachman & Jelalian, 1984; Lachman & McArthur, 1986; Locke-Conner & Walsh, 1980).

These more recent studies have found that negative attitudes are not as widespread as earlier studies had suggested. For example, Conner, Walsh, Litzelman, and Alvarez (1978) found that the evaluation of a job applicant was not a function of age per se but was influenced by the situation of less money, health problems, and physical problems which are increasingly apparent in older people. Reno (1979) found that failure of the older person was attributed to inability and



task difficulty while the failure of the younger person was attributed to a lack of effort. This suggests a subtle bias in that the young could if they would while the old have problems with their ability and with the difficulty of the work. Banziger and Drevenstedt (1982) found that age was seen by subjects as the reason for the failure of the older person and the success of the younger person, as if the old were expected to fail and the young were expected to succeed. Locke-Conner and Walsh (1980) found that age was seen by subjects as the reason for the failure of the older but not the younger job applicant.

A recent meta-analysis (Kite & Johnson, 1988) concluded that attitudes toward older people were more negative than attitudes toward younger people. However, these negative attitudes were reduced under certain conditions. Kite and Johnson reviewed a number of independent variables and found that attitudes toward older people increased in favourability when: a specific target person was used rather than a general old person; between-subjects designs were used, in which subjects did not directly compare old and young targets; work rather than non-work settings were used; there were more items in the dependent measure; the publication was recent; and the author was relatively old. Thus it can be concluded that attitudes toward older people are affected by variables other than age and more recent research has suggested that negative attitudes are not as prevalent as previously thought.

### **Social Contact Hypothesis:**

Increased contact with older people, because of the changing structure of

populations in Western society, may influence the prevalence of negative attitudes. In the majority of Western populations older people are becoming a larger proportion. In New Zealand the fastest growth has recently been seen in the retirement age population (over 60 years old). Such structural changes have resulted in a general ageing of New Zealand's population. National demographic trends for 1989 to 2021 suggest that the population will become progressively older, with the proportion of the population at retirement ages increasing from an estimated 14.9% in 1987 to between 20.9 and 26.0% in 2021 (Demographic Trends, 1988). However, it is recognized here that more older people may not necessarily mean more contact: age groups may remain separated from each other.

The social contact hypothesis suggests that age stereotypes will be relied on to a lesser extent when exposure to old people is increased. It has been assumed that stereotypes are fuelled by ignorance because when there is a lack of information social judgements are based on stereotypes (Revenson, 1989). Age stratification within society may reduce interaction across cohorts (age groups). This may result in an increase in the social distance between cohorts and in cross-cohort misperceptions. Hence, those who know more about ageing may view it favourably because knowledge may displace negative stereotypes (Luszcz & Fitzgerald, 1986).

In ethnic relations research it has been found that contact between segregated groups may decrease prejudice and increase accurate perceptions (Stephan, 1978). Generalizing from this, contact between age groups may lead to positive attitudes. The social contact hypothesis has received considerable but not unanimous support with respect to attitudes toward older people. For example, some high contact

professionals have been found to hold stereotypes. Revenson (1989) found that rheumatologists who had high contact with older people held compassionate stereotypes. Older patients were seen as requiring more support and information, and as less adjusted and competent than younger patients. Other high contact professionals such as administrative and service personnel have been found to hold positive attitudes toward older people (Kabacoff, Shaw, Putnam, & Klein, 1983).

There has also been support for the social contact hypothesis from studies of children's attitudes toward older people. For example, Caspi (1984) found that children in age integrated preschools (with senior citizens as teaching aides) discriminated age categories better and evaluated older people more positively than children in age segregated preschools. However, Nishi-Strattner and Myers (1983) failed to find that increased contact resulted in more positive attitudes toward older people for children aged between 10 and 12 years. Downs and Walz (1981) used young adults as subjects and found that those with regular and frequent contact with grandparents held more positive attitudes than those without such contact.

Thus the social contact hypothesis suggests that contact with older people may influence attitudes toward them, and there is some empirical evidence that increased contact leads to more favourable attitudes.

### **Limitations of Previous Research:**

Much of the research reviewed above has been criticized for problems with both interpretation and measurement.

### Interpretation Problems:

Early studies which have suggested that negative attitudes toward older people exist, may have exaggerated the extremity of the attitudes. Although older people were evaluated less favourably relative to younger people the scores were not negative in all cases, rather, scores were more in the positive to neutral range. Hence, it can be concluded from early studies only that older people were not evaluated as highly as other age groups (Gatz & Pearson, 1988).

### Measurement Problems:

The main measurement problems of previous research have been: age inappropriate tasks, the experimental design used, and the use of a generalized older stimulus person.

#### *Task Appropriateness:*

Stereotypes of the age appropriateness of tasks may be important in age bias. The age appropriateness of a task influences age bias in the evaluation of performance because age bias is specific to the perceived age appropriateness of the task (Drevenstedt, 1981).

Drevenstedt (1981) found that the performance of older people in an area where older people were perceived to be as interested, involved, and knowledgeable as younger people was evaluated comparably with the performance of younger

people. The area she used was writing a newspaper article concerned with gardening. This result implied that only age inappropriate roles would reveal age bias.

### *Experimental Design:*

The effect of age may be minimized in between-subjects designs (Kogan, 1979). Between-subjects designs require subjects to examine either a young or an old target person. Using this design, Braithwaite (1986) found differences as a function of the occupation or health rather than the age of the target person. In contrast, within-subjects designs require subjects to compare young and old target people. Using this design, Kogan found differences as a function of the age of the target person.

The within-subjects design has been criticized for forcing age to the foreground and as a result age becomes a salient characteristic for the subject. This salience is in contrast to the between-subjects design where the comparative referent of the younger person is not obvious to the subject. Hence, in the between-subjects design age is less salient and is just one of the many characteristics that subjects use to make judgements. These suggestions by Kogan (1979) were supported by Wingard et al. (1982). They found that subjects who compared young and old people showed negative attitudes that were more extreme than subjects who made isolated evaluations.

*Specific versus Generalized Older Person:*

In most early studies traits or attributes were listed and subjects responded to Likert or semantic differential scales, with respect to a generalized older stimulus person. The rating of a typical young and/or old person has resulted in the strongest support for negative attitudes toward older people (O'Connell & Rotter, 1979; Weinberger & Millham, 1975). Criticisms of this type of study have included the suggestion that subjects may not give their own feelings because the paradigm compels stereotypic thinking (Bell & Stanfield, 1973; Bringham, 1971). Another criticism has been that the ecological validity may be threatened because, as the only cue given, the salience of age is emphasized (Kogan, 1979; Wingard et al., 1982). These criticisms were supported by Bell and Stanfield (1973) and Weinberger and Millham (1975). They used a specific older person and found no such negative attitudes.

Negative attitudes are apparent when a generalized older person is used as the stimulus person and not when a specific older person is used. This is not altogether contrary to an overall negative view of older people. The specific information may contradict the general negative stereotype, resulting in an especially positive evaluation (Green, 1981). Crockett, Press, and Osterkamp (1979) suggested that this positive evaluation may be explained by the specific older person contradicting usual stereotypes. This may lead to an overreaction to the atypical behaviour and a positive attitude toward the individual. They found that more positive attitudes toward the older compared with the younger person were apparent when subjects perceived the older person as mentally alert, interesting, and as playing an active

social role.

Braithwaite (1986) used the term *antidiscrimination response* to describe the phenomenon where exceptions are made for the older person, as a result of holding generalized negative stereotypes. Braithwaite suggested that cultural expectations of older people result in two opposing responses being invoked when specific targets are used. Firstly, the discrimination stereotype (the usual negative old age stereotype) and secondly, the response to this, the antidiscrimination response of displaying a positive stereotype, sympathizing with, and making allowances for the expected failings of the stigmatized group.

Thus previous research has suffered from a number of measurement problems including age inappropriate tasks, the within-subjects experimental design, and the generalized older stimulus person.

These discrepancies between responses to generalized and specific stimuli and the less prevalent negative attitudes toward older people found in current research may be integrated by reference to recent suggestions of a multidimensional model with both positive and negative stereotypes of older people.

### **Multidimensional Model:**

The work on attitudes toward older people has focused on the question of whether older people are evaluated more negatively than younger people. However, the issue is more complex because, given the nature of attitudes toward

older people reviewed above, older people would not be expected to be evaluated negatively on all dimensions. McTavish (1971) suggested that negative attitudes toward older people were probably not apparent on all dimensions. The multidimensional model proposes that people hold attitudes toward and expectancies of older people that are not necessarily consistent across all dimensions. For example, people may believe that older people are not good at academic tasks but do possess wisdom from experience (as suggested by Kite & Johnson, 1988).

Several studies have given some support to the multidimensional model. Heckhausen, Dixon, and Baltes (1989) used an adjective checklist which described a range of personality, social, and intellectual characteristics. Subjects were required to rate each adjective for developmental increase, desirability, and onset and closing ages. Results suggested that both desirable and undesirable qualities were seen as increasing with age and had onset and closing ages at a late stage of the adult lifespan. Desirable qualities included experience, dignity, knowledge of human nature, and wisdom, and undesirable qualities included cautiousness, forgetfulness, bitterness, and absent mindedness. That is, results suggested that multidirectional change was expected, with gains and losses existing together throughout the lifespan. Despite an overall negative view of ageing both desirable and undesirable changes were perceived to begin or continue throughout life.

Brewer, Dull, and Lui (1981) demonstrated that there were multiple stereotypes of older people that could be distinguished by distinctive clusters of traits. Some of the clusters were positive (e.g., sage and perfect grandparent) whereas others



were negative (e.g., person who is senile, nosy neighbour, individual who is dependent, and bag lady). Furthermore, Hummert (1990) found multiple stereotypes of both young and old age groups: negative stereotypes were not seen as more typical of older people in general than positive stereotypes but negative stereotypes were more typical of the old-old (over 75 years) than positive stereotypes.

### **Summary:**

Thus the literature reviewed on attitudes toward older people has suggested that the early survey and questionnaire studies revealed negative attitudes toward older people, in contrast to the recent, more ecologically valid studies which have suggested that negative attitudes toward older people are not as typical as earlier studies had suggested. The findings of the recent studies may reflect more contact with an increasing proportion of older people in the population. Previous studies have suffered from both interpretation problems and a number of measurement problems including age inappropriate tasks, the experimental design used, and the use of a generalized older person. Finally, a multidimensional model may integrate the results of recent research and the discrepancies between responses to generalized and specific stimuli.

Attitudes toward older people and the influence of contact on these attitudes are examined in the present study. Measurement problems of previous research are also dealt with by introducing what is considered to be a more age relevant task of wisdom and by using a between-subjects design with a specific older person.

The present study tests the multidimensional model by including the further dimension of task as well as stimulus person age. It is expected that a wisdom task may illustrate the positive aspects of attitudes toward older people. In the present study attribution theory is used as a framework in which to study attitudes toward older people. Stereotypes of groups affect attributions and hence these stereotypes are examined using attribution research methods. The next chapter reviews the major attribution theory used in research associated with attributions concerning older people.

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## CHAPTER TWO: ATTRIBUTION THEORY.

Attitudes toward older people have been examined using attribution theory as a framework. After introducing attribution theory this chapter reviews the major theory and research associated with attributions concerning older people. The expectancy confirmation model as an explanation of different attributions as a function of age is also reviewed. It is argued that the limited generalizability of youth oriented tasks used in attribution studies suggests a need for tasks oriented toward older people, such as those requiring wisdom.

### INTRODUCTION:

Attribution is "the study of perceived causation, attribution referring to the perception or inference of cause" (Kelley & Michela, 1980, p. 458). Attribution theory is concerned with the rules governing the causes an individual assigns to observed behaviour. It deals with what Heider (1958) called "naive psychology" or the cause-effect analysis of behaviour made by the layperson. Several theories have been proposed to explain people's attributions: Heider (1958); Jones and Davis (1965); Kelley (1967); and Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum (1972). Of these models that proposed by Weiner et al. (1972) has previously been used most extensively in research into attributions concerning older people (Banziger & Drevenstedt, 1982; Lachman & McArthur, 1986; Reno, 1979; Rodin & Langer, 1980).

## WEINER'S ATTRIBUTION THEORY:

Weiner et al. (1972) presented an attributional model of achievement motivation. They assumed that causal explanations given for success and failure mediated between expectancies, affective responses, and subsequent behaviour for both actors and observers. Heider (1958) was a major influence in this model. He suggested that four causal elements are used to interpret and predict the outcome (success or failure) (O) of an achievement-related event: ability (A), effort (E), task difficulty (T), and luck (L):  $O = f \{A, E, T, L\}$ .

Weiner et al. (1972) classified these four causal elements into two dimensions that are relevant to the present study. The locus dimension (originally called locus of control) involves whether the elements are internal or external to the person: ability and effort are internal, and luck and task difficulty are external elements. The stability dimension involves whether the elements are stable with enduring qualities or unstable with variable qualities: ability and task difficulty are stable, and effort and luck are unstable elements. Hence, there are two dimensions containing the four elements: locus (internal or external) and degree of stability (stable or unstable), as illustrated in Table 1.

Table 1  
*Classification of Causal Elements into Causal Dimensions*

Stability	Locus	
	Internal	External
Stable	ability	task difficulty
Unstable	effort	luck

*Note.* From Weiner et al. (1972).

### Measurement and Research Techniques:

Attributions are not directly observable and, as latent variables, are assumed to exist given their observable effects. It follows that psychometric instruments need to be involved in the indirect measurement of causal elements and dimensions (Whitely & Frieze, 1985).

#### *Causal Elements:*

Elig and Frieze (1979) evaluated three different methods used to identify causal elements in attribution research: (a) the unstructured or open-ended method requiring respondents to state the causes of an outcome, (b) the structured unidimensional method requiring respondents to rate the absolute importance of the given causes, and (c) the structured ipsative method requiring respondents to state the relative importance of the given causes. The multimethod-multitrait analysis carried out on these methods by Elig and Frieze suggested that the most reliable and valid was the structured unidimensional method. In a reanalysis of the Elig and Frieze data, Maruyama (1982) supported their conclusions using confirmatory factor analysis.

The structured unidimensional method is used in the present study, because of its superior reliability and validity over the other methods.

*Categorization of Causal Dimensions:*

Russell, McAuley, and Tarico (1987) acknowledged that the underlying causal dimensions (e.g., locus and stability) may be of more interest than the causal elements (e.g., ability, effort, task difficulty, and luck). The reliability and validity of a causal attribution method for measuring causal elements does not ensure the evaluation of causal dimensions based on this method will similarly give measures that are reliable and valid.

To assess causal dimensions from causal elements two methods have been used: the direct and indirect methods. In the direct method, the way the cause is viewed by the subject is directly assessed, as suggested by Russell (1982) and Weiner (1983). Ronis, Hansen, and O'Leary (1983) found that this method was more reliable and valid than the indirect method. The indirect method involves the causal element given by the subject being translated into a dimension on the basis of the theory. Here it is assumed that the theoretical meaning and the meaning intended by the subject are the same. However, Weiner (1983, 1985) stated that individual and situational differences exist between the translation of attributions from causal elements to causal dimensions.

The present study has a number of conditions and hence for ease of administration and analysis uses the indirect method. This was consistent with a number of other researchers: Banziger and Drevenstedt (1982), Lachman and McArthur (1986), and Reno (1979).

Thus attribution theory is concerned with the rules under which causes are assigned to behaviour. Weiner's attribution theory deals with achievement motivation and classifies causal elements (ability, effort, task difficulty, and luck) into locus and stability dimensions. These elements have been measured by statements and ratings of the absolute or relative importance of causes. As a result of this, the causal dimensions have been directly or indirectly assessed from the causal elements.

### **ATTRIBUTION AND ATTITUDES TOWARD OLDER PEOPLE:**

The attribution studies of attitudes toward older people have mostly used Weiner's attribution theory and the measurement techniques associated with it. These studies accompanied a move toward more ecologically valid studies (as reviewed in Chapter One). Typically, research has used a vignette involving an academic task. The age of the stimulus person and the outcome of the task have been varied to investigate associated attribution processes (Banziger & Drevenstedt, 1982; Lachman & McArthur, 1986; Reno, 1979).

### **Weiner-Model Attributions:**

Lachman and McArthur (1986) suggested that the uncomplimentary pattern of attributions found in studies involving Weiner-model attributions indicated that the older person is seen as less competent than the younger person. For example, Reno (1979) found that the failure of older people was attributed more to internal and stable causes (ability) than the failure of younger people. For success the differences

are not as great, but the success of younger people has been attributed more to internal and stable causes than the success of older people (Lachman & McArthur, 1986).

Reno (1979) presented subjects with a vignette describing an academic task. The age of the male stimulus person and outcome were varied, and subjects were required to rate expectancy of success and causes of success and failure. Reno found that attributions for success were not significantly different whether the stimulus person was young or old. However, failure of the older person was attributed to the stable causes of ability and task difficulty while failure of the younger person was attributed to the unstable cause of effort. Reno suggested that where the active involved older person failed, the normative negative stereotype was invoked: performance was attributed to stable ability and task difficulty causes.

Lachman and McArthur (1986) used an attribution questionnaire consisting of 24 hypothetical events covering success or failure in cognitive, physical, and social domains: these involved memory and problem solving, strength and speed, and independence and nurturance respectively. Age, gender, outcome, and consequences were varied in the experimental design, and subjects rated each event on the causes of the outcome. They found that relative to the younger person, negative cognitive or physical behaviour of the older person was attributed more to inability, and positive behaviour was attributed less to ability. Lachman and McArthur suggested that this unfavourable attitude toward the older person reflected lower expectancies for older people where poor performance is expected and hence attributed to internal causes (discussed below under the Expectancy



Confirmation Model). They also found that relative to failure, success of the older person was attributed more to ability (which was consistent with Lachman & Jelalian, 1984). They suggested that this positive view of the older person reflected their realistic and detailed description of the stimulus person.

Banziger and Drevenstedt (1982) gave subjects a vignette describing an academic situation (as well as a situation of sitting a driver's license). There were a number of conditions which varied the age of the female stimulus person, performance history, task outcome, performance level of others, and outcome importance. Subjects then rated causes of success and failure. Banziger and Drevenstedt failed to find significant differences in Weiner-model attributions as a function of the age of the stimulus person and the subsequent outcome. They suggested that this may reflect their use of a female stimulus person and/or their inclusion of age as an attributional element.

### **Age Attribution:**

Recently, age as an attributional element has been examined both at a general level (Bassilli & Reil, 1981; Braithwaite, 1986) and more directly (Banziger & Drevenstedt, 1982; Locke-Conner & Walsh, 1980). Bassilli and Reil (1981) required subjects to rate a stimulus person on a number of bipolar adjective scales. Age, gender, occupation, and ethnic group were varied. The stimulus person was described along two of the four characteristics, for example a 35-year-old man or a 70-year-old Canadian Indian. They found that older people were stereotyped mostly with respect to their age. In contrast, younger people were stereotyped with

respect to a variety of features such as their gender, occupation, and ethnicity. They suggested that this dominance of the old age stereotype over the others (occupation, gender, and ethnicity) may reflect highly visible physical changes in old age, a distinctive minority group, or lack of inter-age contact.

Braithwaite (1986) presented subjects with a vignette which described a young or an old female stimulus person who was physically or mentally able or disabled. Subjects compared the stimulus person with most other people in terms of concern for others, activity and sociability, and responsibility. Subjects were then asked the importance of the age of the stimulus person in their evaluations. Braithwaite found that his introspective and qualitative data revealed that age was more important in evaluating the older person than the younger person, that is, different evaluation criteria existed as a function of age.

More specifically, Banziger and Drevenstedt (1982) found that failure was attributed more to age for an older person than for a younger person and that success was attributed more to age for a younger person than for an older person. That is, old age was a factor in failure while youth was a factor in success. Locke-Conner and Walsh (1980) partly supported Banziger and Drevenstedt using a design which varied age, gender, competence, and outcome. Subjects were given a vignette describing a job interview and then rated the causes of success or failure (among other dependent variables). They found that age was used more in accounting for the failure of the older person than the failure of the younger person. Although described as being of similar competence to the younger person, failure of the older person was expected more than failure of the younger person.

Demographic characteristics (including age) were the most important factors in explaining failure of the older person.

Thus the attribution studies on attitudes toward older people have usually employed a vignette with an academic task, and varied the age of the stimulus person and outcome to examine attribution processes. Studies using Weiner-model attributions have suggested that relative to the young person, failure of the older person is attributed more to stable causes (e.g., ability and task difficulty). In contrast, relative to the older person, success of the younger person is attributed more to stable causes. Studies which have included age as an attributional element have suggested that age is more important in the evaluation of older than younger people in that failure of older people is attributed more to age than failure of younger people.

The expectancy confirmation model has been invoked to explain these differences in attributions as a function of age.

### **Expectancy Confirmation Model:**

Attributions vary as a function of success or failure. Forgas (1982) found that success was attributed to internal and stable causes while failure was attributed to external causes, by both actors and observers. Exceptions to these findings have been accounted for by the expectancy confirmation model. Butler (1986) noted that certain variables (e.g., gender and age) create generalized expectancies which may affect the attribution process. It has been hypothesized that expected outcomes will

be attributed to stable causes, while unexpected outcomes will be attributed to unstable causes (Kelley, 1967; Weiner et al., 1972). Valle and Frieze (1976) found that the greater the discrepancy between expected and actual outcomes the more the outcomes were attributed to unstable causes.

Research involving the gender variable has usually varied the outcome (success or failure), the gender of target, and the gender linkage of the task to investigate the associated attribution processes. Deaux (1976) found that generalized expectancies resulted in different expectancies and attributions. Performance that was consistent with expectations (where sex role stereotypes formed the basis of these expectations) resulted in attribution to a stable cause (e.g., ability). In contrast, performance that was inconsistent with expectations resulted in attribution to an unstable cause (e.g., luck).

Feldman-Summers and Kiesler (1974) examined the gender linkage of tasks. They found that the expected outcome of success of a male on a masculine task was attributed to stable causes, in contrast to attributions to unstable causes for the success of a female on the same task. The unexpected outcome of failure of a male on a masculine task was attributed to unstable causes, in contrast to attributions to stable and internal causes for the failure of a female on the same task. It would be predicted that a reversal of the findings for the masculine tasks would be found for males and females on feminine tasks. However, the findings for feminine tasks have not supported these notions (Feather & Simon, 1975).

With respect to the variable of age, Reno (1979) generalized from research on

gender by suggesting that social stereotypes imply that the success of young people and failure of old people are expected outcomes and hence these outcomes are attributed to stable causes. In contrast, the failure of young people and the success of old people are unexpected outcomes and hence are attributed to unstable causes. Reno hypothesized that performance which was consistent with expectancies (based on age stereotypes) would result in attributions to stable causes, for example, ability. In contrast, performance which was inconsistent with expectancies would result in attributions to unstable causes. Although the link between expectancies and attributions was used for the development of these hypotheses this link was directly assessed. Reno found no differences in expectancy of success for a young or an old person. She suggested that this reflected the personalized and active and involved older person. The vignette activity of attending college may have resulted in the old person being labelled atypical and hence there was no basis for a lower expectancy of success.

However, other researchers have suggested that lower expectancies of success for older people do exist. Lachman and McArthur (1986) found, in a pilot study, that on cognitive and physical tasks the failure of the older person and the success of the younger person were expected outcomes. Similarly, the qualitative data of Braithwaite (1986) suggested that the expectations of the older person were lower and more negative than expectations of the younger person. Locke-Conner and Walsh (1980) found that although the young and older person were portrayed as being of equivalent competence, in terms of the quality of their responses, the failure of older people was expected more than the failure of younger people.

The age linkage of tasks has parallels with the gender linkage of tasks because in both cases social stereotypes may influence expectations and hence attributions. Generalizing from the findings of the gender linkage of tasks to the age linkage of tasks, it would be predicted that the success of a young person on a youth oriented task would be attributed to stable causes, in contrast to attributions to unstable causes for an old person on the same task. The failure of a young person on a youth oriented task would be attributed to unstable causes, in contrast to attributions to stable causes for an old person's failure on the same task. It would also be predicted that the reverse would be found for tasks oriented toward older people where the success of an old person would be attributed to stable causes, in contrast to attributions to unstable causes for a young person on the same task. Failure of an old person on a task oriented toward older people would be attributed to unstable causes, in contrast to attributions to stable causes for a young person on the same task.

Thus the expectancy confirmation model proposes that expected outcomes are attributed to stable causes while unexpected outcomes are attributed to unstable causes. Gender and age are variables that may effect the attribution process: lower expectancies of success may exist for females relative to males on masculine tasks and for older people relative to younger people on youth oriented tasks. These differences in expectancies may result in attributions in line with the expectancy confirmation model.

### Limited Generalizability of Tasks Employed:

Previous studies of attributions concerning older people have been criticized for the limited range of tasks employed in the vignette: most tasks have been youth oriented rather than oriented toward older people (Drevenstedt, 1981; Lachman & McArthur, 1986). An increase in the variety of tasks used is necessary to determine whether the findings of previous studies generalize to other domains and to examine the differences between domains. Typically, only cognitive tasks (involving academic, memory, and problem solving aspects) have been used: these may invoke negative stereotypes of older people. Negative stereotypes about age related decrements in functioning, particularly learning and memory, have often been reported (McTavish, 1971). Favourable attributions may be apparent on tasks where old people are viewed as more competent. Banziger and Drevenstedt (1982) proposed that attributions would be more favourable toward older people in a task perceived as requiring wisdom. Older people may be seen as more competent on such a task: Heckhausen et al. (1989) found that wisdom was perceived as increasing with age.

Lachman and McArthur (1986) manipulated the task in their study of attributions concerning older people and found that attitudes toward older people varied depending on the nature of the task. The social domain revealed more favourable attributions for older people than the cognitive or physical domains. In the social domain, smaller differences between attributions for the young compared with the old were found, and the negative attributions to the older person occurred less than in cognitive and physical domains. Thus, there were differences in

attributions as a function of the nature of the task.

The present study attempts to extend these findings on the effect of the nature of the task to the area of wisdom. The question of whether older people would be viewed more favourably than the young on wisdom tasks is addressed.

### **Wisdom:**

Wisdom is an emerging area of research. It has been cited as an example of an intellectual ability that may increase with age or develop mostly during adulthood (Baltes, 1987). It has been defined as "an expertise in the fundamental pragmatics of life" (Dixon & Baltes, 1986, p. 225). The importance of wisdom as a performance characteristic of older people is starting to be recognized.

Seeing wisdom as an ability regarding the pragmatics of life implies that wisdom involves highly developed knowledge (factual and procedural) and hence is a result of development over a life time. Featherman (1983) acknowledged the developmental importance of wisdom as a performance trait of older people. Throughout history old age has been valued as a period of wisdom and superior knowledge. The perception has always been that of a positive relationship between wisdom and old age. For centuries wisdom has been ascribed to someone with special insight and understanding in religious and philosophical contexts (Rebok, 1987). Kekes (1983) suggested that the development of wisdom takes time since it depends on depth and clarity about priorities which results in self direction. He also suggested that wisdom has been associated with old age because growth in



wisdom and self direction are tasks for a life time: "one can be old and foolish, but a wise man is likely to be old, simply because such growth takes time" (p. 286).

Recently, traditional psychometric and Piagetian models of adult intelligence, emphasizing intellectual decline in old age, have been questioned. It has been acknowledged that the older person uses different, although not necessarily inferior, modes of intellectual function. Assessment procedures (using tests developed for children) have been held partly responsible for previous conclusions (Baltes & Willis, 1979). This has prompted investigation into wisdom as an alternative form of adult competence.

Holliday and Chandler (1986) reviewed the wisdom literature and concluded that the concept of wisdom was characterized in a consistent and interpretable way and that there was consensus over the nature of wisdom. Wisdom was found to involve practical knowledge based on experience, interpersonal issues, and social understanding. However, the studies reviewed did not, in their opinion, represent an exhaustive list of the descriptors of wise people.

In a more rigorous analysis, Holliday and Chandler (1986) adopted Rosch's (1975) categorization theory. This theory suggests that psychological categories should be grouped with respect to the clearest instance or prototype of the category. Then instances are allocated to categories by comparison of the potential member with the prototype. When someone is described as wise the assumption is that s/he possesses attributes or behaviours to allow inclusion into the category. Therefore it is appropriate to investigate the associated prototype of the wisdom

category. Holliday and Chandler gathered descriptions of wise people (including learning from experience, using common sense, seeing things in a larger context, and older) and from this generated the prototype typifying the category of wise people. The prototype included exceptional understanding (learned from experience and understands people), judgement and communication skills (source of good advice and considers all options), general competencies (an advisor/mentor and understands/evaluates information), interpersonal skills (good listener and compassionate), and social unobtrusiveness (non-judgmental and discreet). This prototype of wisdom may be useful in examining expectancies of success in tasks requiring wisdom where older people may be expected to perform better. Hence, wisdom tasks may reveal attributions with a positive view of older people.

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### **Summary:**

Thus the literature reviewed on Weiner's attribution theory and age attributions concerning older people has suggested a negative view of older people. The failure of older people was attributed more to stable causes and more to age than younger people. These differences in attributions as a function of age have been explained by the expectancy confirmation model which suggests that expected outcomes are attributed to stable causes and unexpected outcomes are attributed to unstable causes. Previous attribution studies have generally used a limited number of youth oriented tasks and hence tasks oriented toward older people may suggest a more positive view. Wisdom has been offered as an area where older people may be seen as more competent.

Within an attribution framework, the present study aims to investigate the multidimensional model by examining the conditions under which attitudes toward older people differ: specifically on the task dimension. The problem of the limited generalizability of the tasks employed in previous research is addressed by the present study with the inclusion of what are considered to be tasks relevant to young and older people: academic and wisdom tasks respectively. The general aim of the present study is to examine attitudes toward older people and the influence of contact on these attitudes. The specific objectives and hypotheses are outlined in the next chapter.

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### CHAPTER THREE: OBJECTIVES AND HYPOTHESES.

The purpose of the present study is to examine attitudes toward older people within an attribution framework. As indications of attitudes the study examines expectancies of success, attributions for performance, and the relationship between these. The study also examines the influence of contact on these attitudes. The multidimensional model, especially the dimension of task, is tested by the inclusion of both academic and wisdom tasks.

#### 1. Expectancy of Success:

The first objective is to examine expectancy of success as a function of the age of a stimulus person, the task involved, and the amount of contact with older people. It is predicted that:

1.1 On an academic task, there will be no difference between the expectancy of success for an older and a younger person.

1.2 High contact subjects will expect better academic performance for an older person than will low contact subjects.

1.3 On a wisdom task, an older person will be expected to perform better than a younger person.

1.4 High contact subjects will expect better wisdom performance for an older person than will low contact subjects.

1.5 An older person will be expected to perform better on a wisdom task than on an academic task.

1.6 A younger person will be expected to perform better on an academic task than on a wisdom task.

## **2. Link Between Expectancies and Attributions:**

The second objective is to examine the relationship between expectations of success and Weiner-model and age attributions (although age does not fit into the taxonomy it was examined for exploratory reasons). It is predicted that:

2.1 Unexpected outcomes will be attributed to unstable causes and expected outcomes will be attributed to stable causes.

## **3. Weiner-Model Attributions:**

Weiner-model attributions differ as a function of the age of the stimulus person on academic tasks (Lachman & McArthur, 1986; Reno, 1979). For failure, attribution to stable causes (ability and task difficulty) reflects unfavourable attitudes because such attributions suggest that a lack of ability and the difficulty of the work hamper success. In contrast, attribution to unstable causes (effort and luck) for

failure reflects favourable attitudes because such attributions suggest that success would be possible with effort and that failure was just a result of chance reasons.

For success, attribution to stable causes (ability and task difficulty) reflects favourable attitudes because such attributions suggest that the person has the ability to do the task and that they have no difficulty coping with the difficulty of the task. In contrast, attribution to unstable causes (effort and luck) for success reflects unfavourable attitudes because such attributions suggest that success is due to persistence at the task and to chances reasons.

The third objective is to examine Weiner-model attributions for success and failure as a function of the age of a stimulus person, the task involved, and the amount of contact with older people. It is predicted that:

3.1 On an academic task, relative to the failure of a young person, *failure* of an old person will be attributed more to *stable* causes (Lachman & McArthur, 1986; Reno, 1979). Relative to the success of a young person, *success* of an old person will be attributed more to *unstable* causes (Lachman & McArthur, 1986).

3.2 On an academic task, relative to low contact subjects, high contact subjects will attribute the *failure* of an old person more to *unstable* causes. Relative to low contact subjects, high contact subjects will attribute the *success* of an old person more to *stable* causes.

3.3 On a wisdom task, relative to the failure of a young person, *failure* of an old

person will be attributed more to *unstable* causes. Relative to the success of a young person, *success* of an old person will be attributed more to *stable* causes.

3.4 On a wisdom task, relative to low contact subjects, high contact subjects will attribute the *failure* of an old person more to *unstable* causes. Relative to low contact subjects, high contact subjects will attribute the *success* of an old person more to *stable* causes.

3.5 Relative to failure on an academic task, failure on a wisdom task will be attributed more to *unstable* causes for an *old* person. Relative to failure on an academic task, failure on a wisdom task will be attributed more to *stable* causes for a *young* person.

3.6 Relative to success on an academic task, success on a wisdom task will be attributed more to *stable* causes for an *old* person. Relative to success on an academic task, success on a wisdom task will be attributed more to *unstable* causes for a *young* person.

#### 4. Age Attribution:

Age is more important in the evaluation of older people than younger people (Bassilli & Reil, 1981; Braithwaite, 1986). For failure, attribution to age reflects unfavourable attitudes because such an attribution suggests that the old are expected to fail. In contrast, for success, attribution to age reflects favourable attitudes because such an attribution suggests that old people are expected to

succeed.

The fourth objective is to examine attribution to age for success and failure as a function of the age of the stimulus person, the task involved, and the amount of contact with older people. It is predicted that:

4.1 On an academic task, relative to the failure of a young person, failure of an old person will be attributed more to age.

4.2 On an academic task, relative to high contact subjects, low contact subjects will attribute the *failure* of an old person more to age. Relative to low contact subjects, high contact subjects will attribute the *success* of an old person more to age.

4.3 On a wisdom task, relative to the success of a young person, success of a older person will be attributed more to age.

4.4 On a wisdom task, relative to high contact subjects, low contact subjects will attribute the *failure* of an old person more to age. Relative to low contact subjects, high contact subjects will attribute the *success* of an old person more to age.

4.5 Relative to failure on an wisdom task, failure on an academic task will be attributed more to age for an old person.

4.6 Relative to success on an academic task, success on a wisdom task will be attributed more to age for an old person.



## CHAPTER FOUR:

### METHOD.

#### Overview and Design:

The experiment employed a between-subjects  $2 \times 2 \times 2$  (Age  $\times$  Task  $\times$  Performance Outcome) design. The independent variables were age (25 vs. 64 years), task (academic vs. wisdom), and performance outcome (success vs. failure).

Subjects were provided with a hypothetical scenario describing a 25- or 64-year-old female involved in either an academic or wisdom task. They were then asked to estimate her likelihood of success. Following this, the outcome of the task was stated and the subjects rated causal factors.

#### Subjects:

The subjects were 296 university students taking an introductory psychology paper who volunteered during regular lecture time. The subjects varied in age from 17 to 64 years, with a mean age of 21 years and median and modal ages of 19 years. The majority of subjects (94%) were under 26 years old. There were 184 females and 112 males. Most of the subjects were of European ethnic affiliation (85%) and 5% were of New Zealand Maori affiliation.

### Research Instrument:

The research instrument used was a questionnaire consisting of a five page booklet (see Appendix A). The first page instructed subjects to complete each page prior to moving to the next page. Instructions were also given on the marking of the rating scales.

The second page described a hypothetical female stimulus person, aged 25 or 64 years, performing either an academic or wisdom task: that is, there were four versions of this page. The vignette described only a female in order to simplify the experimental design. In addition, it is important to distinguish between older male and female stimuli. Walsh and Conner (1979) commented that older men and women may be perceived differently and that previous studies had failed to specify the gender of the older person. To operationalize the age of the young and the old person, the age of the stimulus person was specified as 25 or 64 years old (Drevenstedt, 1981; Walsh & Conner, 1979). The content of the academic task was based on previous studies which have employed similar tasks (Banziger & Drevenstedt, 1982; Reno, 1979). However, the content of the wisdom task involved a pilot study (described in the Development of Questionnaire section below, under Pilot Study 1). It was necessary to ascertain what tasks would be perceived as requiring wisdom given the lack of previous research.

Page three required subjects to estimate how likely it was that the stimulus person performed well on the task described. This was rated on a 9-point scale anchored by 1 = very unlikely and 9 = very likely.

Page four described the success or failure of the 25- or 64-year-old stimulus person on the academic or wisdom task. Subjects were then required to indicate the extent to which each of five factors caused the outcome: ability (high/low), effort (high/low), task difficulty (easy/hard task), luck(good/bad), and age. The causes selected were those identified as the most salient in the attribution literature (Weiner, 1985) and the literature involving attribution and attitudes toward older people (Banziger & Drevenstedt, 1982; Lachman & McArthur, 1986; Reno, 1979; Rodin & Langer, 1980). These causes were presented in two random orders: that is, there were eight versions of this page. The extent to which each factor caused the outcome was rated on a 9-point scale anchored by 1 = to no extent caused the outcome and 9 = to an extremely high extent caused the outcome. The scale length was similar to that used by Feather and Simon (1971), Forgas (1982), and Valle and Frieze (1976).

On the final page was a question relating to the amount of personal contact with people over 60 years of age. There were five categories of contact: daily, weekly, monthly, yearly, and never, which combined the categories used by Nishi-Strattner and Myers (1983) and Caspi (1984). Demographic questions were also asked. Subjects were asked their predominant cultural or ethnic affiliation according to the six categories used in the 1986 census: European, New Zealand Maori, Pacific Island Polynesian, Chinese, Indian, and other (New Zealand Yearbook, 1988). Subjects were also asked their year of birth and gender.

## Development of Questionnaire:

### Pilot Study 1:

Given the lack of previous examples of wisdom tasks a pilot study was necessary to ascertain what tasks would be perceived as requiring wisdom (see Appendix B). Four tasks were developed on the basis of Holliday and Chandler's (1986) five factor prototype of wisdom. The factors were exceptional understanding, judgement and communication skills, general competencies, interpersonal skills, and social unobtrusiveness. A questionnaire containing these tasks was administered to 16 students who were not involved with the introductory psychology paper. They were asked to indicate the extent to which wisdom was involved in each task on a 5-point rating scale anchored by 1 = requires no wisdom to 5 = requires a lot of wisdom.

It was found that the task rated first (involving conflict at home) was rated the highest. Hence, a further pilot study using a reverse order of the tasks was conducted with another 16 students to eliminate a possible order effect. Overall, the task perceived as requiring the most wisdom was that involving conflict at home.

### Pilot Study 2:

To test the research procedure a very similar version of the five page booklet described in the Research Instrument section above was administered to 12 first year students who were not involved in the introductory psychology paper. This

was revised only slightly with respect to the ethnic group question on page five. The pilot study revealed that some subjects preferred not to use European as an ethnic group. Hence, the predominant cultural or ethnic affiliation terminology was used to overcome this problem with the ethnic group term (see Appendix C).

**Procedure:**

Subjects were randomly assigned to the eight experimental conditions using a computer generated random number method with 37 subjects per condition. The subjects were administered the questionnaire on the 9th or 10th of April 1990.

Prior to the distribution of the questionnaire the subjects were given a very general indication of the nature of the study and told that participation was voluntary. They were also told that it would only take a few minutes to complete the questionnaire. The confidentiality of the subjects was ensured with the questionnaires completed anonymously. They were instructed to complete each page before turning to the next page and to complete it individually, not discussing it with other class members.

On completion, subjects were told when and where feedback regarding the nature of the study and the hypotheses being tested would be given (see Appendix D, for feedback based on an earlier version of the data analysis).

## CHAPTER FIVE:

### RESULTS.

#### Statistical Analysis:

Computer analysis involved processing the data with SPSS-x, the Statistics Package for the Social Sciences (Norusis, 1985).

1. Descriptive statistics, including means and standard deviations, were computed.
2. Bivariate statistics, including *t*-tests, were computed to establish whether differences between groups were significant.
3. Multiple regression analyses were performed. Multiple regression enables the assessment of the relationship between dependent and independent variables. Several independent variables are used to predict a value on a dependent variable. This results in an equation that represents the best prediction of a dependent variable from several independent variables (Tabachnick & Fidell, 1989).
4. Multivariate analyses of variance (MANOVAs) were performed. MANOVA takes into account the correlations between the dependent variables and considers all the means simultaneously (Cliff, 1987). Consideration of the interrelationships among the dependent variables enables more information to be gained. Observation of the effect of manipulation on all criteria simultaneously enables complex relationships to be investigated (Winer, 1971). However, there are risks of judgmental errors and

interpretation difficulties in a complex analysis (Tabachnick & Fidell, 1989). Hence, to lessen these risks the present study used six separate MANOVAs.

For all analyses the minimum significance or alpha level was set at  $p = .05$ . All significance values represent two-tailed tests. The assumptions for all analyses were met.

Analysis by *t*-tests showed no significant gender differences between subjects on the dependent measures of expectancy of success and causal attributions. The data were therefore collapsed across subject gender.

To increase cell size, the contact variable was formed by collapsing across the never, yearly, and monthly categories to form a low contact category ( $N = 170$ ) and collapsing across the weekly and daily categories to form a high contact category ( $N = 126$ ).

### **1. Differences in Expectancy of Success for Experimental Conditions.**

The first objective of the present study was to examine expectancy of success as a function of the age of the stimulus person, the task involved, and the amount of contact with older people.

Table 2 shows that on the academic task there were no differences between expectancies of success as a function of whether the stimulus person was young ( $M = 5.8$ ) or old ( $M = 5.8$ ). On the wisdom task, there was little difference between

expectancies of success as a function of whether the stimulus person was young ( $M = 5.3$ ) or old ( $M = 5.4$ ),  $t(146) = 0.49$ ,  $p = .63$ .

Table 2 also shows that expectancies were higher on the academic than on the wisdom task. The older person was expected to perform better on the academic task ( $M = 5.8$ ) than on the wisdom task ( $M = 5.4$ ),  $t(146) = 1.44$ ,  $p = .15$ . The younger person was expected to perform better on the academic task ( $M = 5.8$ ) than on the wisdom task ( $M = 5.3$ ),  $t(146) = 2.14$ ,  $p = .03$ .

Table 2  
*Means and Standard Deviations of Expectancy of Success by Type of Task and Age of Stimulus Person*

Task	Age of stimulus person	
	25 years	64 years
Academic	5.8 (1.5) <sub>a</sub>	5.8 (2.0)
Wisdom	5.3 (1.7) <sub>a</sub>	5.4 (1.6)

*Note.* Higher means represent more likely to succeed (9-point scale). *SD* are in parentheses.  $N = 296$ .

Means with same subscript differ significantly at  $p = .03$ .

Table 3 shows that high contact subjects expected better academic performance for the older person ( $M = 6.2$ ) than did low contact subjects ( $M = 5.6$ ). The difference was not significant,  $t(72) = -1.25$ ,  $p = .21$ . Table 3 also shows that low contact subjects expected better wisdom performance for the older person ( $M = 5.8$ ) than did high contact subjects ( $M = 4.9$ ),  $t(72) = 2.20$ ,  $p = .03$ .



Table 3  
*Means and Standard Deviations of Expectancy of Success by Type of Task and Contact for the 64-Year-Old Stimulus Person*

Task	Contact	
	High	Low
Academic	6.2 (1.6)	5.6 (2.2)
Wisdom	4.9 (1.8) <sub>a</sub>	5.8 (1.4) <sub>a</sub>

*Note.* Higher means represent more likely to succeed (9-point scale). *SD* are in parentheses.  $N = 148$ .

Means with same subscript differ significantly at  $p = .04$ .

## 2. Predicting Attributions Using Expectancies:

The second objective of the present study was to examine the relationship between expectancy of success and attribution. The measures of expectancy of success and causal attributions were entered separately into all-in multiple regression equations. A separate multiple regression equation was computed for each of the eight experimental cells. Thus a total of eight multiple regressions were performed. Of the eight equations two yielded statistically significant relationships.

All-in multiple regression involves all of the variables being introduced into the analysis as a block and the variance being accounted for by each variable takes into account the presence of the other variables in the analysis (Cliff, 1987). The adjusted  $R$  squared was used to estimate the population value of  $R$  because it adjusts for the overestimate of the sample  $R$ . Beta was used for the regression equation weights because it is a standardized weight used when there is more than one independent variable in the analysis (Tabachnick & Fidell, 1989).

Table 4 shows that where subjects were asked to rate the old stimulus person who subsequently succeeded on the academic task there was a significant relationship between expectancy of success and attributions. The expectancy of success independent variable explained 28.0% of the variance in causal attributions ( $F = 3.77, p = .01$ ). The variables accounting for this explained variance were age ( $\beta = .509, p = .002$ ) and luck ( $\beta = -.356, p = .038$ ). That is, the more success was expected the more it was attributed to age. And, the less success was expected the more it was attributed to luck.

Table 4  
*Regression Analysis Results with Attributions as Dependent and Expectancy of Success as Predictor for the Success of 64-Year-Old on Academic Task*

Dependent	Beta	Significance
Age	.509	=.002
Ability	-.064	=.669
Luck	-.356	=.038
Task Difficulty	-.051	=.746
Effort	-.257	=.117
$F = 3.77 \quad p = .01 \quad \text{Adjusted } R^2 = .28$		

Table 5 shows that where subjects were asked to rate the young stimulus person who subsequently failed on the academic task there was a significant relationship between expectancy of success and attributions. The expectancy of success independent variable explained 22.0% of the variance in causal attributions ( $F = 3.00, p = .03$ ). The variables accounting for this explained variance were task difficulty ( $\beta = -.550, p = .006$ ) and effort ( $\beta = -.390, p = .032$ ). That is, the less failure was expected the more it was attributed to task difficulty and effort.

Table 5  
*Regression Analysis Results with Attributions as Dependent and Expectancy of Success as Predictor for the Failure of 25-Year-Old on Academic Task*

Dependent	Beta	Significance
Age	-.209	=.174
Effort	-.390	=.032
Luck	.187	=.239
Task Difficulty	-.550	=.006
Ability	.338	=.105
$F = 3.00 \quad p = .03 \quad \text{Adjusted } R^2 = .22$		

### 3. Differences in Weiner-Model and Age Attributions for Experimental Conditions:

The third and fourth objectives were to examine Weiner-model and age attributions as a function of the age of the stimulus person, the task involved, the outcome, and the amount of contact with older people. These objectives were examined with six 2 x 2 factorial MANOVAs on the dependent attribution variables (ability, effort, task difficulty, luck, and age).

When significant multivariate effects were found univariate  $F$ -tests were carried out to determine the variables in which the significant differences occurred. Pillai's trace was used as the multivariate test statistic because this is the most robust: the significance level is reasonably correct even when the assumptions are violated (Olson, 1976). Simple effects tests were then used to define the nature of the significant differences. Tables of the means and multivariate and univariate tests of significance are presented in Appendix E.

Interaction effects were interpreted before main effects because they are of primary interest in the present study and because where there is a significant interaction effect (showing whether two or more independent variables combine to have an effect on the dependent variable) the main effect (showing the effect of each independent variable on the dependent variable) cannot be interpreted as it stands: the relationship with the other independent variables must be taken into account first (Kidder, Judd, & Smith, 1986).

1. A 2 (young, old)  $\times$  2 (success, failure) factorial MANOVA for the academic task yielded significant results for the stimulus person age by outcome interaction, multivariate  $F(5, 148) = 2.49, p = .03$ .

Subsequent examination of univariate results for the five causal attributions revealed a significant stimulus person age by outcome interaction for the effort,  $F(1, 144) = 6.07, p = .02$ , and age attributions,  $F(1, 144) = 5.92, p = .02$ .

Simple effects tests of the means defined the nature of this interaction by showing that it represented a difference in effort and age attributions as a function of the age of the stimulus person in the failure but not the success condition, as shown in Figures 1 and 2. Failure of the young stimulus person was attributed more to effort ( $M = 5.5$ ) than failure of the old stimulus person ( $M = 4.3$ ),  $t(72) = -2.31, p = .02$ . Failure of the old stimulus person was attributed more to age ( $M = 5.2$ ) than failure of the young stimulus person ( $M = 3.2$ ),  $t(72) = 3.4, p = .00$ .

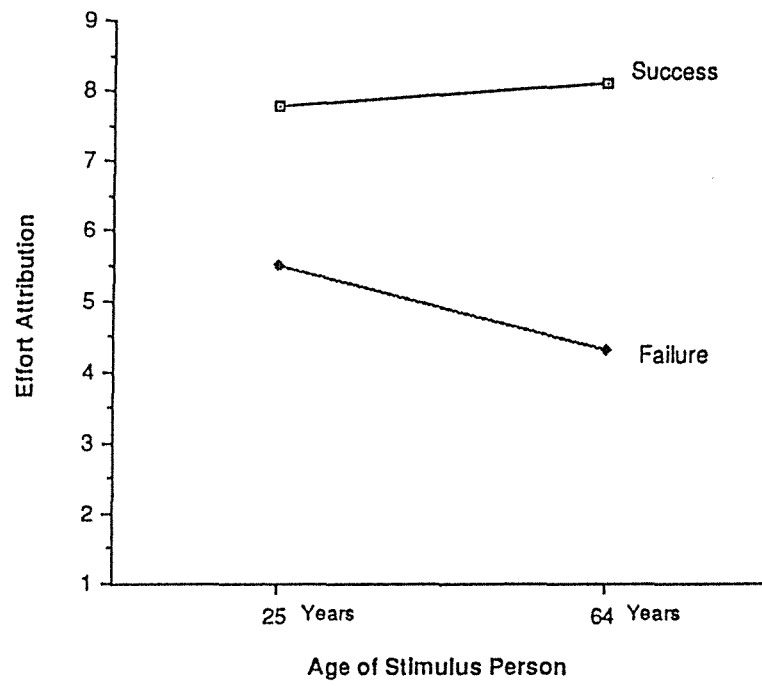


Figure 1. Interaction effect of age of stimulus person and outcome for effort attribution.

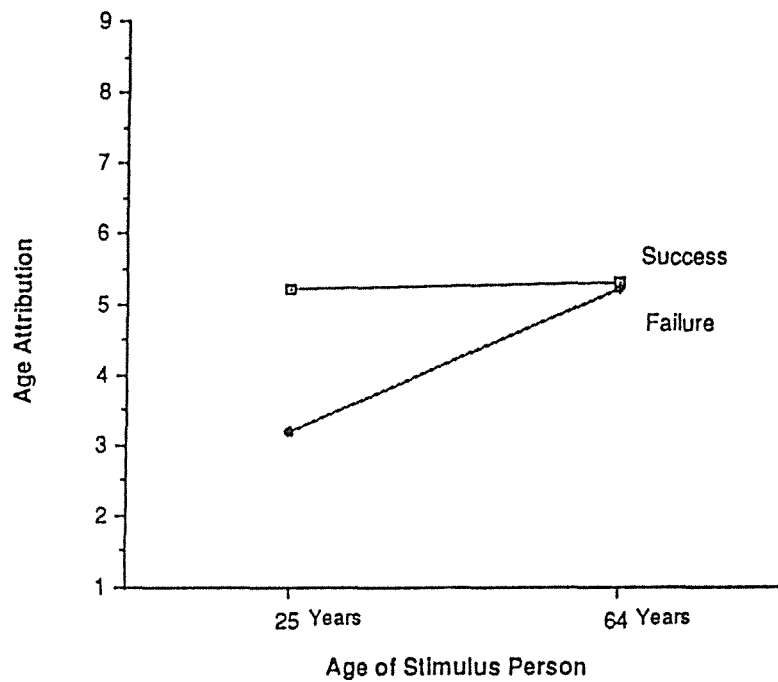


Figure 2. Interaction effect of age of stimulus person and outcome for age attribution.

2. A 2 (success, failure)  $\times$  2 (high, low contact) factorial MANOVA for the 64-year-old on the academic task did not yield a significant outcome by contact interaction, multivariate  $F(5, 74) = 0.38, p = .86$ . There were few differences between mean attributions on the academic task as a function of the outcome and the amount of contact for the 64-year-old stimulus person.

However, there was a significant main effect for outcome, multivariate  $F(5, 74) = 21.12, p = .00$ . Subsequent examination of the univariate results for the five causal attributions revealed a significant main effect for the ability,  $F(1, 70) = 14.12, p = .00$ , effort,  $F(1, 70) = 96.80, p = .00$ , and task difficulty attributions,  $F(1, 70) = 10.80, p = .00$ .

3. A 2 (young, old)  $\times$  2 (success, failure) factorial MANOVA for the wisdom task did not yield a significant stimulus person age by outcome interaction, multivariate  $F(5, 148) = 0.74, p = .60$ . There were few differences between mean attributions on the wisdom task as a function of the outcome and the age of the stimulus person.

However, there was a significant main effect for outcome, multivariate  $F(5, 148) = 27.56, p = .00$ . Subsequent examination of the univariate results for the five causal attributions revealed a significant main effect for the ability,  $F(1, 144) = 5.35, p = .02$ , effort,  $F(1, 144) = 99.01, p = .00$ , task difficulty,  $F(1, 144) = 19.55, p = .00$ , and age attributions,  $F(1, 144) = 17.71, p = .00$ .

4. A 2 (success, failure)  $\times$  2 (high, low contact) factorial MANOVA for the 64-year-old on the wisdom task did not yield a significant outcome by contact interaction,

multivariate  $F(5, 74) = 0.31, p = .90$ . There were few differences in mean attributions on the wisdom task as a function of the outcome and the amount of contact for the 64-year-old stimulus person.

However, there was a significant main effect for outcome, multivariate  $F(5, 74) = 11.49, p = .00$ . Subsequent examination of the univariate results for the five causal attributions revealed a significant main effect for the effort,  $F(1, 70) = 42.76, p = .00$ , task difficulty,  $F(1, 70) = 9.83, p = .00$ , and age attributions,  $F(1, 70) = 5.75, p = .02$ .

5. A 2 (young, old)  $\times$  2 (academic, wisdom) factorial MANOVA for the failure outcome did not yield a significant stimulus person age by task interaction, multivariate  $F(5, 148) = 1.87, p = .10$ . There were few differences in mean attributions as a function of the age of the stimulus person and the task involved for the failure outcome. Failure on the part of the young stimulus person was attributed more to effort on the academic task ( $M = 5.5$ ) than the wisdom task ( $M = 3.5$ ) and more to age on the wisdom task ( $M = 4.3$ ) than the academic task ( $M = 3.2$ ).

However, there was a significant main effect for task, multivariate  $F(5, 148) = 2.73, p = .02$ . Subsequent examination of the univariate results for the five causal attributions revealed a significant main effect for the effort attribution,  $F(1, 144) = 11.45, p = .01$ . And a significant main effect for stimulus person age, multivariate  $F(5, 148) = 2.50, p = .03$ . Subsequent examination of the univariate effects for the five causal attributions revealed a significant main effect for age attribution,  $F(1, 144) = 10.02, p = .00$ .

6. A 2 (young, old)  $\times$  2 (academic, wisdom) factorial MANOVA for the success outcome did not yield a significant stimulus person age by task interaction, multivariate  $F(5, 148) = 0.81, p = .54$ . There were few differences in mean attributions as a function of the age of the stimulus person and the task involved for the success outcome.

However, there was a significant main effect for task, multivariate  $F(5, 148) = 9.46, p = .00$ . Subsequent examination of the univariate results for the five causal attributions revealed a significant main effect for the effort,  $F(1, 144) = 35.10, p = .00$ , luck,  $F(1, 144) = 5.49, p = .02$  and age attributions,  $F(1, 144) = 6.33, p = .01$ .

### **Summary of Results:**

Overall, there were few statistically significant results of the present study. Firstly, there were no significant differences in expectancy of success as a function of the age of the stimulus person on the academic task, but the younger person was expected to perform better on the academic than the wisdom task. Those with low contact with older people expected the older person to be more likely to succeed on the wisdom task than those with high contact.

Secondly, there were only two significant correlations between expectancies and attributions. The older person's success on the academic task was attributed to age where success was expected and to luck where success was unexpected. And the younger person's failure on the academic task was attributed to task difficulty and effort where failure was unexpected.



Thirdly, the only significant difference in Weiner-model attributions as a function of task, age of stimulus person, outcome, and contact was that the failure of the young stimulus person on the academic task was attributed more to effort than the failure of the old person.

Finally, the only significant difference in age attribution as a function of task, age of the stimulus person, outcome, and contact was that the failure of the older person on the academic task was attributed more to age than the failure of the younger person.

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## CHAPTER SIX: DISCUSSION

The purpose of the present study was to examine attitudes toward older people within an attribution framework. Differences in expectancy of success and attributions for performance and the relationship between these were explored as an indication of attitudes.

### EXTENT OF SUPPORT FOR HYPOTHESES, AND COMPARISON OF RESULTS WITH THOSE FROM PREVIOUS RESEARCH:

#### 1. Expectancy of Success.

The results of the present study partly support the hypotheses concerning the effects of the age of the stimulus person, the task, and contact with older people, on expectancy of success.

The results supporting the hypotheses were, the absence of differences in expectancy of success for the academic task as a function of the age of the stimulus person (hypothesis 1.1) and the greater expectancy of success for the younger person on the academic than on the wisdom task (hypothesis 1.6). However, in contrast to hypothesis 1.4, on the wisdom task the older person was expected to perform better by low contact subjects than by high contact subjects.

The lack of difference in expectancies on the academic task is consistent with Reno (1979) and Kite and Johnson (1988). With respect to the influence of the

amount of contact with older people on expectancies of their success, the present results were in the opposite direction to that hypothesized for the wisdom task and did not support other researchers' findings that those who have more contact with older people hold more favourable attitudes toward them (Caspi, 1984; Downs & Walz, 1981).

Previous research has not directly examined expectancies (or attributions) on wisdom tasks, hence, although there was a sound basis for the development of the other hypotheses that were not supported, the present results do not directly relate to any previous research. Similarly, there is no directly relevant research relating to the hypotheses regarding expectancy of success (or attributions) as a function of contact.

## **2. Link Between Expectancies and Attributions:**

The present findings offer limited support for the hypothesis that differences in expectancies would lead to different attributions.

The results of the present study indicated significant differences in two relationships: expectancies were related to some attributions on the academic task for the success of the older person and for the failure of the younger person. The first group of significant results suggested that the more success of the older person on the academic task was unexpected, the more it was attributed to luck which is an unstable cause (hypothesis 2.1). In addition the more success of the older person on the academic task was expected the more it was attributed to their age. The

second group of significant results suggested that the more failure of the younger person on the academic task was unexpected the more it was attributed to effort (hypothesis 2.1) and task difficulty (unstable and stable causes respectively).

On the academic task, attribution to luck for the unexpected success of the older person and to effort for the unexpected failure of the younger person support the findings of Deaux (1976). However, most relationships were not significant.

### **3. Weiner-Model Attributions:**

Overall, results offer limited support for the hypotheses concerning the effects of the age of the stimulus person, the task, the outcome, and contact with older people, on Weiner-model attributions.

The results suggested a significant difference in attribution to effort as a function of the age of stimulus person and outcome: on the academic task failure of the younger person was attributed more to a lack of effort (unstable cause) relative to the failure of the older person (hypothesis 3.1).

The overall lack of differences in Weiner-model attributions for the success outcome found in the present study is not consistent with Lachman and McArthur (1986) and Reno (1979). However, the attribution to a lack of effort for the failure of the younger person relative to the older person on the academic task is consistent with Reno. In addition, she found that failure of an older person was attributed to the stable causes of ability and task difficulty.

There are no directly relevant studies with which to compare the lack of significant results regarding attributions for performance on the wisdom task.

#### **4. Age Attribution:**

The findings of the present research partly support the hypotheses concerning the effects of the age of the stimulus person, the task, the outcome, and contact with older people, on attribution to age.

The results indicated significant differences in the rating of age as an attributional cause as a function of the age of the stimulus person and the outcome: on the academic task, the failure of the older person was attributed more to age than was the failure of the younger person (hypothesis 4.1).

The greater attribution to age for the failure of the older person relative to the younger person is consistent with Banziger and Drevenstedt (1982) and Braithwaite (1986). Both found that attribution to age was stronger for the failure of the old person compared with the younger person. However, Banziger and Drevenstedt also found this stronger attribution to age for the success of a younger person compared with an older person.

#### **EXTENT OF SUPPORT FOR THE MULTIDIMENSIONAL MODEL:**

In a test of the multidimensional model the dimension of task as well as stimulus person age was included in the present study. It was expected that the

results would illustrate both positive and negative aspects of attitudes toward older people.

Overall, there was some evidence for both negative and positive attitudes. Age was used to explain the negative outcome of failure on an academic task. The finding that age was a more important factor in the failure of the older person on the academic task relative to the younger person strongly suggests that negative attitudes toward old people still exist. On the academic task, the age of the stimulus person influenced subjects as to the impact of old age as a causal factor in failure but age (young or old) was not a factor in success. Hence age was a salient causal attribution in explaining differences between the failure of the young and old person on the academic task.

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The finding that the failure of the younger person on the academic task was attributed more to a lack of effort relative to the older person also implies a negative view of the older person. Effort, as an unstable temporary cause which can be improved, reflects a positive view of the younger person. The young person compared with the old failed only because she did not try hard enough, the old person failed for other reasons, such as her age.

A negative view of older people was also suggested by the finding that where the success of the older person on the academic task was unexpected, subjects made the unstable attribution of luck. That is, where an older person was expected to fail but in fact succeeded this was attributed to good luck. This suggests a negative view of the older person because the subjects, who were all students,

would be aware of the limited impact of luck on success in university courses.

In contrast there was also some evidence for a positive view of older people. Where the success of the older person on the academic task was expected, subjects attributed this to age. That is, where the older person was expected to succeed and did so this was attributed to their age. The significance of age suggests a positive view of older people in that the age of 64 years is seen as a reason for expected success. Although this reflects a positive view of older people it is not in line with the multidimensional model which suggests that positive attitudes toward older people will be apparent on tasks other than those involving academic aspects. It may be that the older person was seen as having more time to study or that she was competent in an academic setting because she was motivated enough to enrol and stay in the course in the first place and hence was seen as likely to succeed.

The relative lack of apparent positive and negative attitudes toward older people suggests that the perception of older people is similar to that of younger people, in the particular section of society examined: negative attitudes toward older people were not generally apparent on academic tasks and positive attitudes were not generally apparent on wisdom tasks.

The apparent absence of ageism may reflect recent initiatives in New Zealand to heighten the profile of older people. For example, the establishment of "Grey Power" as a pressure group for the equality and rights of older people, may have increased positive perceptions of older people (Misa, 1989). Various media campaigns have also been aimed at improving attitudes toward older people, for

example, the "Getting Older and Bolder" campaign. This campaign involved television commercials featuring teenagers and older men and women. Slogans, badges, stickers, and posters complemented the films and were printed with phrases like "I'm getting older and bolder"; "I'm getting older but refuse to grow up"; "I'm getting older and having fun" (Ageing and Education Working Party, 1987).

Several measurement problems were addressed in the present study which tested the hypotheses more rigorously than some previous studies. This may also explain the relative lack of differential positive and negative attitudes toward older people based on the dimensions examined.

A between-subjects design was used. The within-subjects design employed in previous studies where subjects rated both young and old people, may have forced an intergroup comparison. The increase in the differences in evaluations of the two groups found in previous studies may be an artifact of the within-subjects design. In the present study age stereotypes were less accessible and demand characteristics were reduced. Thus age stereotypes would be relied on to a lesser extent since an intergroup response set was not imposed on subjects.

A specific older person was used. The stimulus person was referred to by name and her age was incorporated into the vignette, as opposed to the general older person used in previous studies. The effect of social stereotypes on the evaluation of individuals may be explained by the *base rate fallacy* (Locksley, Hepburn & Oritz, 1982). The effect of the relevant stereotypical beliefs on the evaluation of a



stimulus person may be reduced by the inclusion of individuating information about that person. They found that stereotypic beliefs were reduced when information about the stimulus person was available. Hence it is argued that the use of a specific older person rather than a category of older people in general increases individuating information. Therefore judgements of the stimulus person reflected subjects' decreased reliance on age related stereotypical beliefs. This reasoning has implications for everyday interaction. The appearance of age related stereotypes in everyday situations would be a function of the accessibility of the categories young and old, with increased accessibility resulting in more stereotypical beliefs.

Thus the examination of the conditions under which attitudes toward younger and older people may differ in the present study offers a basis for concluding that on the dimension of task there is little difference between the evaluation of older and younger people: they are evaluated comparably on both academic and wisdom tasks. The reduction in age stereotype accessibility in the experiment, due to the use of a between-subjects design with a specific older person, may explain the limited support for differences in attitudes as a function of the age of the stimulus person and the task involved. Alternatively, attitudes toward young and old people may not be different.

#### **EXTENT OF SUPPORT FOR THE EXPECTANCY CONFIRMATION MODEL:**

There was weak support for the expectancy confirmation model: unexpected outcomes on the academic task were attributed to the unstable causes of luck for

the success of the older person and of effort for the failure of the younger person. The existence of some relationships suggests that this may be a worthwhile area for future research.

Although intuitively logical, the evidence for the expectancy confirmation model (suggesting that stable attributions are made for expected outcomes and unstable attributions are made for unexpected outcomes) is not very strong for the age variable. Previously this model has not been evaluated with age as a variable. Reno (1979) examined age based expectancies and attributions. She formed attribution hypotheses based on the link between expectancies and attributions but did not analyze this link.

It is acknowledged in the present study that, there was no difference in expectancies as a function of the age of the stimulus person, and that further hypotheses based on a link between expectancies and attributions were examined. Although this may appear inconsistent it is argued that further hypotheses were examined because, despite there being no apparent differences in expectancies, worthwhile findings may arise even if differences in expectancies were not detected. This absence of difference may be due to a lack of sensitivity of the present measures to detect differences or to demand characteristics in that subjects may not have been willing to overtly say that the stimulus person would fail.

#### **EXTENT OF SUPPORT FOR THE SOCIAL CONTACT HYPOTHESIS:**

The amount of contact with older people influenced attitudes toward older

people on the wisdom task: low contact subjects expected better performance than high contact subjects.

The results imply that the effect of contact with older people was reflected in older people being seen as less competent on wisdom tasks. It would appear that interaction across cohorts has little effect on the social distance between cohorts and the accuracy of cross-cohort perceptions. A knowledge of older people through personal contact did not displace negative stereotypes and those who were more knowledgeable did not view older people more favourably, in contrast to the social contact hypothesis.

There is no support for the social contact hypothesis. It can be argued that the hypothesis is correct only under certain conditions. Previous research with young adults has usually involved contact with relatives (Nishi-Strattner & Myers, 1983). Downs and Walz (1981) chose subjects on the basis of their maintenance of frequent and regular contact with one or both elderly grandparents (involving at least a one hour visit a week with grandparents over 55 years of age). In the present study, contact for students living away from home may mean contact with older people in academic or religious situations rather than with their family members.

In considering the present findings it is important to be aware of the methodological limitations of the present study.

## **METHODOLOGICAL LIMITATIONS OF THE PRESENT STUDY:**

### **Sample:**

The main limitation with the sample used in the present study is the limited generalizability of the results with respect to the occupation, age, and ethnic affiliation of the subjects. Hence, the findings may be applicable only to students, in particular those within the age group and ethnic affiliation sampled and not to the broader population.

### **Instruments:**

The vignette used in the present study may have influenced the results. The overall lack of differences in attributions as a function of the age of the stimulus person and outcome on the academic and wisdom tasks may reflect the use of a female stimulus person in the vignette. Gender stereotypes as well as age stereotypes may have been introduced, masking any differences in attitudes as a function of age. The relationships among these stereotypes may have resulted in various interactions and confounding which affected the present results.

The specific information described in the vignette may have influenced the results. In the wisdom task, the very fact that Margaret is called on to give advice may imply that she is seen as wise regardless of age. Success was defined as the likelihood of Margaret giving good advice to a female friend involved in a family conflict situation at home. This may have been perceived as involving knowledge

of family dynamics as well as wisdom. Hence wisdom may have been seen as a necessary but not sufficient reason for success. In the academic task, the fact that Margaret has just finished the course may have influenced results. This may imply that Margaret had already passed the course and the following question of likelihood of success was in fact redundant.

The conclusions regarding expectancy of success should be treated with caution because they are based on a single item measure which has several problems associated with it, such as difficulty in establishing validity and reliability (Kite and Johnson, 1988).

Finally, the use of dimensional terms (e.g., stable/unstable) throughout this discussion is theoretically based because the subjects' perceptions of the causal dimensions were not directly assessed.

#### **FUTURE RESEARCH RECOMMENDATIONS:**

1. There should be further empirical investigation of the age appropriateness of the academic and wisdom tasks. Such research should concentrate on establishing whether both tasks are perceived as being age appropriate for older people by specifically asking the most appropriate age for the task and the outcome. If this was found then it would suggest a reason for the lack of differences in attitudes under the academic and wisdom conditions. The present findings suggest that both the academic and wisdom tasks are perceived as age appropriate and hence there are no differences in expectancies of success or attributions as a function of the age

of the stimulus person.

2. Alternative kinds of wisdom tasks should be used in future research. By focusing on various aspects of wisdom those dimensions on which older people are viewed as more competent will be established.

3. The attitudes of older people themselves should be examined using the same methodology in future research. Their own attitudes and the way they perceive younger people view them should be focused on. Their opinions of how other people view them will influence their own attitudes toward ageing, their self esteem and self perceptions.

4. Future research should also directly examine attitudes toward older people in general and the relationship between these and expectancies and attributions regarding the specific older person. This would establish if generalized negative stereotypes toward older people are retained along with more positive views of a specific older person and also address the question of accessibility of age related stereotypes.

5. Given the problems of single item measures further research should investigate the expectancy of success measure as a multifaceted variable. Such research should consider the comparability of facets across tasks. For example, success on an academic task can be further measured by grade but a comparable measure is not suitable for the wisdom task, at least as it was given in the present study.

6. To increase the validity of the attribution measures used in the present study, future research should directly assess the subjects' perceptions of the dimensions associated with the causes used. This would enable more valid statements to be made with respect to the dimensions associated with the causal elements.

## CONCLUSIONS:

The problems of earlier studies which focused on the question of whether older people are evaluated more negatively than younger people were addressed in the present study with the examination of the conditions under which differences in perceptions of younger and older people occur.

The dimension of task was examined in the present study: the task of wisdom and the use of a between-subjects experimental design with a specific older person was introduced. There were few differences between attitudes toward older and younger people as measured under the present conditions. The view of both age groups was comparable across tasks. However, there was some evidence of negative and positive attitudes toward older people.

This evidence suggests that further empirical investigation of the multidimensional model may be a fruitful area of research. Such research should concentrate on the conditions or dimensions that influence attitudes toward older people and on the impact of accessibility of age stereotypes on the evaluation of specific older people.

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## APPENDICES

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**APPENDIX A.**

**Questionnaire used in present study:**



Margaret Johnson, aged 64 is employed by a national insurance company. She is married and lives with her husband who has a job with the local Regional Authority. Mrs Johnson has just finished a university science paper at the local university.



Please estimate now how likely it is that Margaret Johnson did well in the paper.

\_\_\_\_\_

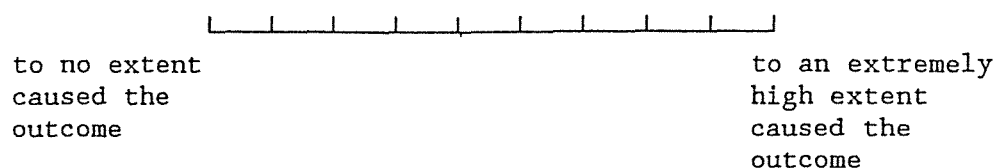
very  
unlikely

very  
likely

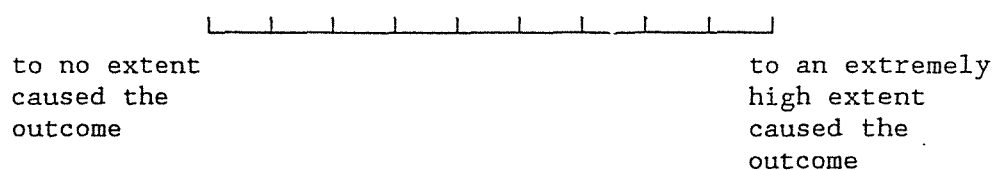
Margaret in fact did very poorly. She obtained an E grade on the paper.

Now please indicate on the scales below the extent to which the following factors caused this outcome.

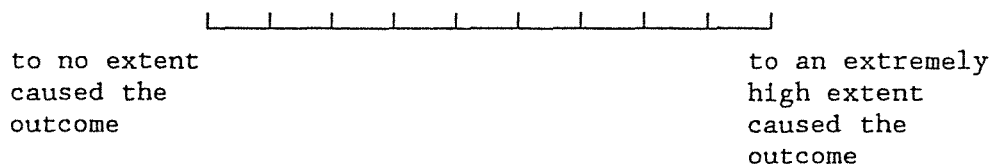
a) Low Ability:



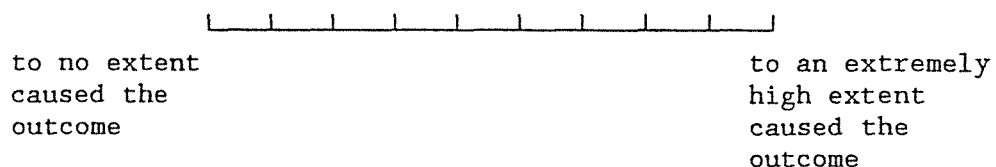
b) Low Effort:



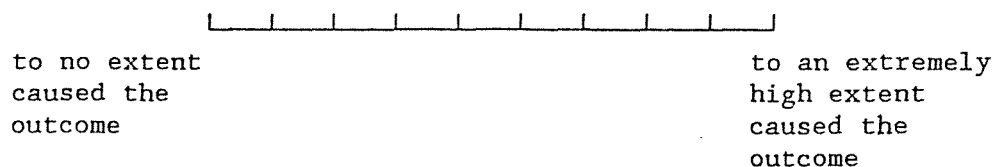
c) Hard Task:



d) Bad Luck:



e) Age:



Finally, there are some questions about yourself.

How much personal contact do you have with people over 60 years of age?

\_\_\_\_\_ daily      \_\_\_\_\_ weekly      \_\_\_\_\_ monthly  
\_\_\_\_\_ yearly      \_\_\_\_\_ never

What is your predominant cultural or ethnic affiliation.

\_\_\_\_\_ European    \_\_\_\_\_ New Zealand Maori    \_\_\_\_\_ Pacific Island Polynesian  
\_\_\_\_\_ Chinese    \_\_\_\_\_ Indian    \_\_\_\_\_ Other (please specify)

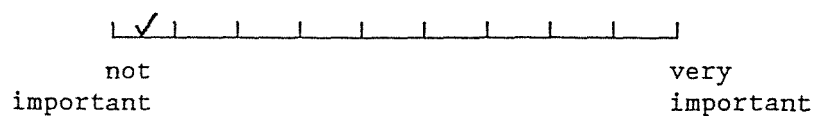
In what year were you born? ..... \_\_\_\_\_

Gender .....      Male    Female

Thank you very much for taking the time to answer these questions.

Please read the following questionnaire carefully. Complete each page before you move on to the next page.

You will be asked to use rating scales. For example if you are asked to rate the importance of an item and you think it is not important you would mark the scale like this:



Margaret Johnson, aged 25 is employed by a national insurance company. She is married and lives with her husband who has a job with the local Regional Authority. Mrs Johnson has just been called on by a friend for advice in a family conflict she is involved in at home.

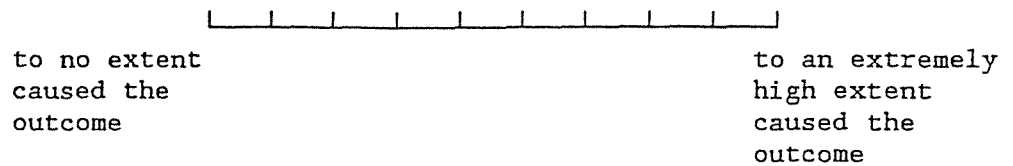
Please estimate now how likely it is that Margaret Johnson gave good advice.

very											very
unlikely											likely

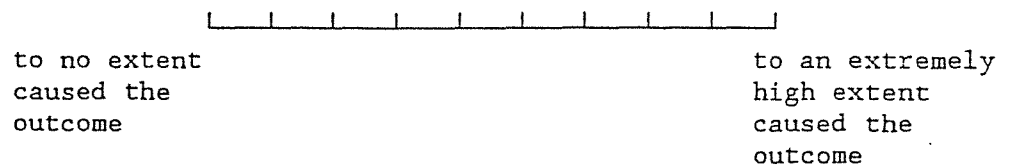
Margaret in fact gave very good advice. Her friend found the advice very helpful in resolving the family conflict.

Now please indicate on the scales below the extent to which the following factors caused this outcome.

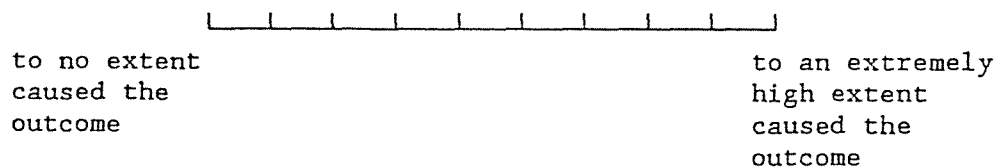
a) Easy Task:



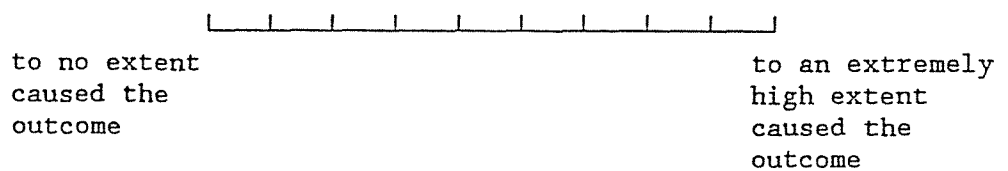
b) Good Luck:



c.) Age:



d) High Ability



e) High effort:



Finally, there are some questions about yourself.

How much personal contact do you have with people over 60 years of age?

\_\_\_\_\_ daily      \_\_\_\_\_ weekly      \_\_\_\_\_ monthly

\_\_\_\_\_ yearly      \_\_\_\_\_ never

What is your predominant cultural or ethnic affiliation.

\_\_\_\_\_ European      \_\_\_\_\_ New Zealand Maori      \_\_\_\_\_ Pacific Island Polynesian

\_\_\_\_\_ Chinese      \_\_\_\_\_ Indian      \_\_\_\_\_ Other (please specify)

In what year were you born? ..... \_\_\_\_\_

Gender .....      Male      Female

Thank you very much for taking the time to answer these questions.



## APPENDIX B

## Pilot Study 1:

Table B-1

*Holliday and Chandler (1986) Wisdom Prototype: Variables Defining the Five Factors Identified in the Principal Components Analysis*

<b>1. Exceptional Understanding:</b> * uses common sense * self actualized * has learned from experience * sees things within a larger context * observant/perceptive * understands him- or herself * sees the essence of situations * intuitive * philosophical * empathic * not necessarily formally educated * open minded * flexible * understands people * thinks for him- herself	* articulate * alert * respected * self-actualized * an advisor or mentor * complex * creative * older * able to predict how things will turn out * educated * successful * methodical * experienced * knowledgeable
<b>2. Judgement and Communication Skills:</b> * aware * is a source of good advice * comprehending * understands life * worth listening to * considers all options in a situation * reflective * thinks carefully before deciding * foresightful/farseeing * weighs the consequences of actions * sees and considers all points of view * uncondescending * conservative * astute * knows when to give/not give advice	<b>4. Interpersonal skills:</b> * fair * sensitive * reliable * a good listener * even tempered * poised * modest/humble * sociable * moral * patient * unselfish * kind * spiritual * happy * mature * compassionate
<b>3. General Competencies:</b> * curious * thoughtful/thinks a great deal * understands/evaluates information * well-read * intelligent	<b>5. Social Unobtrusiveness:</b> * discreet * non-judgmental * non-impulsive * quiet * plans carefully

*Note:* From Holliday and Chandler (1986).

### Wisdom Questionnaire Used in Pilot Study 1:

Below are a list of situations. Using the rating scale that goes from requires no wisdom to requires a lot of wisdom please indicate the extent to which each situation requires wisdom on Margaret's part. For example, if you think the situation requires a lot of wisdom you would mark the scale like this:

<div style="border-bottom: 1px solid black; width: 100%; position: relative;"> <div style="position: absolute; right: 0; top: -10px;">✓</div> </div>
<div style="display: flex; justify-content: space-between;"> <span>requires</span> <span>requires a lot</span> </div> <div style="display: flex; justify-content: space-between;"> <span>no wisdom</span> <span>of wisdom</span> </div>

1. Margaret is called on by a friend for advice in a family conflict she is involved in at home.

<div style="border-bottom: 1px solid black; width: 100%; position: relative;"> </div>
<div style="display: flex; justify-content: space-between;"> <span>requires</span> <span>requires a lot</span> </div> <div style="display: flex; justify-content: space-between;"> <span>no wisdom</span> <span>of wisdom</span> </div>

2. Margaret's advice is called on to judge the pros and cons of a community development proposal which requires her to have an understanding of the broader implications of the proposal and to evaluate all the information available.

<div style="border-bottom: 1px solid black; width: 100%; position: relative;"> </div>
<div style="display: flex; justify-content: space-between;"> <span>requires</span> <span>requires a lot</span> </div> <div style="display: flex; justify-content: space-between;"> <span>no wisdom</span> <span>of wisdom</span> </div>

3. A friend informs Margaret that she has lied over an important matter to her husband and asks Margaret for advice on what she should do.

<div style="border-bottom: 1px solid black; width: 100%; position: relative;"> </div>
<div style="display: flex; justify-content: space-between;"> <span>requires</span> <span>requires a lot</span> </div> <div style="display: flex; justify-content: space-between;"> <span>no wisdom</span> <span>of wisdom</span> </div>

4. Margaret is called on by a colleague for advice in a conflict she is involved in at work with other staff members.

<div style="border-bottom: 1px solid black; width: 100%; position: relative;"> </div>
<div style="display: flex; justify-content: space-between;"> <span>requires</span> <span>requires a lot</span> </div> <div style="display: flex; justify-content: space-between;"> <span>no wisdom</span> <span>of wisdom</span> </div>

Thank you for completing these questions.

### Wisdom Tasks Used in Pilot Study 1:

1. Margaret is called on by a friend for advice in a family conflict she is involved in at home.
2. Margaret's advice is called on to judge the pros and cons of a community development proposal which requires her to have an understanding of the broader implications of the proposal and to evaluate all the information available.
3. A friend informs Margaret that she has lied over an important matter to her husband and asks Margaret for advice on what she should do.
4. Margaret is called on by a colleague for advice in a conflict she is involved in at work with other staff members.

### **Results of Pilot Study 1:**

Table B-2  
*Mean Wisdom Ratings of Four Tasks*

Task	Mean wisdom rating		
	Admin 1	Admin 2	Overall
1	4.3	4.0	4.2
2	4.0	3.6	3.9
3	3.9	3.9	3.9
4	3.6	4.2	3.9

## APPENDIX C.

Ethnic question used in questionnaire:

Ethnic question used in pilot study 2:

What ethnic group do you belong to?

☐ European ☐ New Zealand Maori ☐ Pacific Island Polynesian

☐ Chinese ☐ Indian ☐ Other (please specify)

Ethnic question used in actual questionnaire:

What is your predominant cultural or ethnic affiliation?

☐ European ☐ New Zealand Maori ☐ Pacific Island Polynesian

☐ Chinese ☐ Indian ☐ Other (please specify)

## APPENDIX D.

Feedback to subjects:

### ATTITUDES TO AGEING IN AN ATTRIBUTION FRAMEWORK

#### INTRODUCTION:

Studies have tended to show that negative attitudes to ageing exist. For example, older people are thought of as inflexible, conservative, withdrawn, and with physical and mental deterioration. Older people are not expected to succeed on various tasks to the same extent as young people. Usually academic tasks have been employed. However, it has also been found that people perceive wisdom and knowledge of human behaviour to increase with age.

The consequences of expectancies of success have been studied within the framework of attribution theory. According to this theory expected outcomes tend to be attributed to stable factors (e.g., ability and task difficulty) while unexpected outcomes tend to be attributed to unstable factors (e.g., luck and effort).

The present study looks at attitudes to ageing from an attribution perspective.

#### Hypotheses:

1: An older person would not be expected to perform as well as a younger person on an academic task.

2: In a task requiring wisdom an older person would be expected to perform better than a younger person.

3: Failure of an older person on an academic task (an expected outcome) would be attributed more to stable causal factors (ability) than the failure of a younger person (unexpected). In contrast the success of an older person (unexpected) would be attributed more to unstable factors (effort or luck) than the success of a young person (expected) on an academic task.

4: In a task requiring wisdom the success of an older person (expected) would be attributed to more stable causal factors (ability) than success of a younger person (unexpected). In contrast the failure of an older person (unexpected) would be attributed more to unstable causal factors (effort and luck) than the failure of a younger person on a wisdom task.

## **METHOD:**

### Subjects:

There were 112 male and 184 female university students with a mean age of 21 years. They were randomly assigned to eight conditions with 37 subjects in each condition.

### Procedure:

There were eight conditions representing each possible combination of three variables. The variables were age (25 or 64), task (academic or wisdom), and outcome (success or failure).

Subjects were given a hypothetical scenario involving either an academic or wisdom task where the age of the person doing the task was stated as either 25 or 64 years.

Then subjects were asked to estimate the likelihood of success on a 9-point scale (1 = very unlikely, 9 = very likely).

The outcome of the task was given (success or failure). Subjects were then asked to rate the extent to which each of five factors caused the outcome (ability, effort, task difficulty, luck, and age) on a 9-point scale (1 = to no extent caused the outcome, 9 = to a very high extent caused the outcome).

## RESULTS:

Hypothesis 1: An older person would not be expected to perform as well as a younger person on an academic task.

The mean expectancy of success in the academic task for the 64 year old was 5.85 and for the 25 year old was also 5.85.

This suggests that the attitudes were not negative in that the expectancy of success was rated as likely in both age conditions.

Hypothesis 2: In a task requiring wisdom an older person would be expected to perform better than a younger person.

The mean expectancy of success in the wisdom task for the 64-year-old was 5.45 and for the 25-year-old was 5.25.

This suggests that the older person was expected to succeed slightly more than the younger person on the wisdom task.

Hypothesis 3: For attributions relating to performance on academic tasks failure of an old person (an expected outcome) would be attributed more to stable causal factors (ability) than the failure of a young person (unexpected). In contrast the success of an older person (unexpected) would be attributed more to unstable factors (effort or luck) than the success of a young person (expected) on an academic task.

Table D-1  
*Mean Ratings of Causal Factors for Academic Task*

Attribution	Academic Task			
	Success		Failure	
	64 yr	25 yr	64 yr	25 yr
ability	6.6	6.7	5.2	5.2
task difficulty	3.9	4.4	5.7	5.7
luck	2.2	2.7	3.0	3.0
effort	8.1	7.9	4.3	5.5

Table 1 suggests that on the academic task there were no significant differences in attributions to stable causes for the failure of the young and old person. However, the failure of the young person was attributed more to a lack of effort on the task (unstable) than the older person.



In the academic task, success was attributed more to luck (unstable) and task (stable) for a younger person than an older person.

Hypothesis 4: In a task requiring wisdom the success of an older person (expected) would be attributed to more stable causal factors (ability) than success of a younger person (unexpected). In contrast the failure of an older person (unexpected) would be attributed more to unstable causal factors (effort and luck) than the failure of a younger person.

Table D-2  
*Mean Ratings of Causal Factors for Wisdom Task*

Attribution	Wisdom task			
	Success		Failure	
	64 yr	25 yr	64 yr	25 yr
ability	6.1	6.2	5.3	5.6
task difficulty	4.6	4.1	6.1	5.6
luck	3.3	3.0	2.8	3.4
effort	6.6	6.8	3.8	3.5

Table 2 suggests that on the wisdom task, success was attributed more to the ease of the task (stable), for an older person than for a younger person.

In the wisdom task, failure was attributed more to task (stable) for an older than for a younger person, and more to luck (unstable) for a younger person than for an older person.

## Appendix E: Means and Univariate and Multivariate Results.

Table E-1

*Means and Standard Deviations of Weiner-Model and Age Attributions by Outcome and Stimulus Person Age for Academic Task for Hypotheses 3.1 and 4.1*

Attribution	Outcome for stimulus age			
	Success		Failure	
	25 years	64 years	25 years	64 years
Ability high/low	6.7 (1.7)	6.7 (1.6)	5.2 (2.1)	5.2 (2.0)
Effort high/low	7.9 (1.1)	8.1 (0.8)	5.5 <sub>a</sub> (2.2)	4.3 <sub>a</sub> (2.2)
Task difficulty high/low	4.4 (2.1)	3.9 (2.2)	5.7 (1.9)	5.7 (1.7)
Luck good/bad	2.7 (1.7)	2.2 (1.5)	3.0 (2.2)	3.0 (1.9)
Age	5.2 (2.0)	5.3 (2.2)	3.2 <sub>b</sub> (2.2)	5.2 <sub>b</sub> (2.8)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses. *N* = 148.

Means with same subscript differ significantly at <sub>a</sub>  $p = .02$ . <sub>b</sub>  $p = .001$ .

Table E-2

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.1 and 4.1*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Outcome by Stimulus Age	.082	2.485	5.0	140.00	.034
Outcome	.548	33.995	5.0	140.00	.000
Stimulus Age	.077	2.336	5.0	140.00	.045

Table E-3

*Univariate F-tests for the Interaction Effect of Outcome by Stimulus Age in Analysis for Hypotheses 3.1 and 4.1*

Univariate F-tests with (1,140) DF.

Variable	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
Ability	.007	502.811	.007	3.492	.002	.965
Effort	17.574	416.703	17.574	2.894	6.073	.015
Task Difficulty	1.730	579.405	1.730	4.024	.431	.513
Luck	2.703	492.378	2.703	3.419	.790	.375
Age	32.169	782.378	32.169	5.433	5.921	.016

Table E-4

*Means and Standard Deviations of Weiner-Model and Age Attributions by Outcome and Contact for Academic Task for 64-Year-Old Stimulus Person for Hypotheses 3.2 and 4.2*

Attribution	Outcome for subject contact			
	Success		Failure	
	High Contact	Low Contact	High Contact	Low Contact
Ability high/low	6.2 (1.3)	7.0 (1.8)	4.4 (1.7)	5.5 (2.1)
Effort high/low	7.9 (0.8)	8.2 (0.8)	3.6 (1.8)	4.5 (2.3)
Task difficulty easy/hard	4.0 (2.1)	3.9 (2.4)	5.2 (1.6)	5.9 (1.7)
Luck good/bad	2.6 (1.7)	1.9 (1.3)	3.1 (2.1)	3.0 (1.9)
Age	4.9 (1.8)	5.6 (2.5)	4.6 (2.4)	5.5 (2.9)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses. *N* = 74.

Table E-5

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.2 and 4.2*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Outcome by Contact	.028	.376	5.0	66.00	.863
Outcome	.615	21.117	5.0	66.00	.000
Contact	.115	1.712	5.0	66.00	.144

Table E-6

*Means and Standard Deviations of Weiner-Model and Age Attributions by Outcome and Stimulus Person Age for Wisdom Task for Hypotheses 3.3 and 4.3*

Attribution	Outcome for stimulus age			
	Success		Failure	
	25 years	64 years	25 years	64 years
Ability high/low	6.2 (1.4)	6.1 (1.7)	5.6 (2.0)	5.3 (2.4)
Effort high/low	6.8 (1.4)	6.6 (1.7)	3.5 (2.2)	3.8 (2.1)
Task difficulty easy/hard	4.1 (2.3)	4.6 (2.2)	5.6 (1.9)	6.1 (2.0)
Luck good/bad	3.0 (2.1)	3.3 (1.9)	3.4 (2.2)	2.8 (2.2)
Age	6.0 (1.6)	6.1 (2.0)	4.3 (2.5)	4.9 (2.3)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses.  
*N* = 148

Table E-7

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.3 and 4.3*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Outcome by Stimulus Age	.026	.739	5.0	140.0	.595
Outcome	.496	27.564	5.0	140.0	.000
Stimulus Age	.030	.855	5.0	140.0	.513

Table E-8

*Means and Standard Deviations of Weiner-Model and Age Attributions by Outcome and Contact for Wisdom Task for 64-Year-Old Stimulus Person for Hypotheses 3.4 and 4.4*

Attribution	Outcome for subject contact			
	Success		Failure	
	High Contact	Low Contact	High Contact	Low Contact
Ability high/low	6.3 (1.9)	5.9 (1.5)	5.0 (2.7)	5.4 (2.3)
Effort high/low	6.6 (1.6)	6.7 (1.7)	3.2 (2.1)	4.0 (2.2)
Task difficulty easy/hard	5.0 (2.0)	4.1 (2.3)	6.3 (2.3)	5.9 (1.9)
Luck good/bad	2.9 (1.6)	3.8 (2.1)	2.4 (2.0)	3.0 (2.3)
Age	6.1 (2.4)	6.2 (1.3)	4.9 (2.0)	4.8 (2.4)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses. *N* = 74.

Table E-9

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.4 and 4.4*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Outcome by Contact	.023	.314	5.0	66.0	.903
Outcome	.465	11.492	5.0	66.0	.000
Contact	.078	1.124	5.0	66.0	.357

Table E-10

*Means and Standard Deviations of Weiner-Model and Age Attributions by Task and Stimulus Person Age for Failure for Hypotheses 3.5 and 4.5*

Attribution	Task for stimulus age			
	Academic Task		Wisdom task	
	25 years	64 years	25 years	64 years
Ability high/low	5.2 (2.1)	5.2 (2.0)	5.6 (2.0)	5.3 (2.4)
Effort high/low	5.5 (2.2)	4.3 (2.2)	3.5 (2.2)	3.8 (2.1)
Task difficulty easy/hard	5.7 (1.9)	5.7 (1.7)	5.6 (1.9)	6.1 (2.0)
Luck good/bad	3.0 (2.2)	3.0 (1.9)	3.4 (2.2)	2.8 (2.2)
Age	3.2 (2.2)	5.2 (2.8)	4.3 (2.5)	4.9 (2.3)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses. *N* = 148.

Table E-11

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.5 and 4.5*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Stimulus Age by Task	.063	1.870	5.0	140.0	.103
Task	.089	2.733	5.0	140.0	.022
Stimulus Age	.082	2.504	5.0	140.0	.033

Table E-12

*Means and Standard Deviations of Weiner-Model and Age Attributions by Stimulus Person Age and Task for Success for hypotheses 3.6 and 4.6*

Attribution	Task for stimulus age			
	Academic task		Wisdom task	
	25 years	64 years	25 years	64 years
Ability high/low	6.7 (1.7)	6.7 (1.6)	6.2 (1.4)	6.1 (1.7)
Effort high/low	7.9 (1.1)	8.1 (0.8)	6.8 (1.4)	6.6 (1.7)
Task difficulty high/low	4.4 (2.1)	3.9 (2.2)	4.1 (2.3)	4.6 (2.2)
Luck good/bad	2.7 (1.7)	2.2 (1.5)	3.0 (2.1)	3.3 (1.9)
Age	5.2 (2.0)	5.3 (2.2)	6.0 (1.6)	6.1 (2.0)

*Note.* Higher means represent higher extent (9-point scale). *SD* are in parentheses. *N* = 148.

Table E-13

*Pillai's Trace Multivariate Tests of Significance for Hypotheses 3.6 and 4.6*

Effect	Value	Exact F	Hypoth DF	Error DF	Sig of F
Stimulus Age by Task	.028	.813	5.0	140.0	.542
Task	.252	9.460	5.0	140.0	.000
Stimulus Age	.004	.112	5.0	140.0	.990