The influence of job stereotype and age comparison on personnel decisions affecting older workers

Kathleen Chase Landkammer

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd-project

Part of the Gerontology Commons

Recommended Citation

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
THE INFLUENCE OF JOB STEREOTYPE AND AGE COMPARISON ON PERSONNEL DECISIONS AFFECTING OLDER WORKERS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology

by
Kathleen Chase Landkammer
June 1990
THE INFLUENCE OF JOB STEREOTYPE AND AGE COMPARISON ON PERSONNEL DECISIONS AFFECTING OLDER WORKERS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

by
Kathleen Chase Landkammer
June 1990

Approved by:

Dr. Janet L. Kottke, Chair, Psychology

Dr. Matt L. Riggs, Psychology

Dr. N. Laura Kamptner, Psychology
Abstract

This study, a replication of a study by Lee and Clemons (1985), examined the effect of age comparison on personnel decisions affecting older workers. In addition, the influence of job stereotype was investigated. Sixty students enrolled in graduate level management courses made decisions about older workers in two hypothetical work situations. Confirmation was found for the hypothesis replicating Lee and Clemons (1985) study. Older workers did receive more favorable decisions when a choice between older and younger workers was not required. A significant effect was also found for job stereotype. As hypothesized, older workers in stereotypically appropriate job received more positive judgments than older workers in stereotypically inappropriate jobs. Partial support was found for the interaction hypothesis (Job Stereotype X Age). In an age comparison situation, older workers received more favorable decisions in the old job stereotype condition; however, younger workers did not receive more favorable decisions in the young job stereotype condition. Possible reasons for decisions were also solicited from subjects. There were no significant differences in their reasons for decision by job stereotype condition. Implications and suggestions for further research are discussed.
Acknowledgements

There are many wonderful people who have supported me in this endeavor. A special thank you goes to my committee chair, Dr. Janet Kottke. I am grateful, not only for her expertise and guidance, but also for her endless support and encouragement which kept me going when I didn't think I could make it. Every graduate student should have a chair as special as Jan.

The valuable contributions of my committee members, Dr Matt Riggs and Dr. Laura Kamptner, truly enhanced this paper while their personalities enhanced my experience. Matt, your wit and levity always helped me keep my perspective. And Laura, your positive energy gave me confidence when I had none.

I feel very lucky to have happened upon such a great group of friends to share this adventure with. Gila, Kris, Mario, Tina and Travis, you've helped me more than you will ever know. I love you all.

To, my very first teachers, Mom and Dad. Thank you for teaching me to appreciate the value of knowledge and the benefits of persistence. And for always accepting my choices as my own.
Kristi and Jody, thank you for letting me share this experience with you. I hope that by watching me struggle and persevere you will have the strength to be the best you can be. My growth has been our growth.

And finally, thank you Kenneth. This has truly been a shared experience. In fact, none of this would have been possible without you. Between babies, and budgets, and battles, you stood by me and encouraged me to keep going although I know it was not easy for you. I love you. I respect you. And I thank you.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Page</td>
<td>i</td>
</tr>
<tr>
<td>Signature Page</td>
<td>ii</td>
</tr>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>vi</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>viii</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Stereotypes and the Older Worker</td>
<td>2</td>
</tr>
<tr>
<td>Performance and the Older Worker</td>
<td>5</td>
</tr>
<tr>
<td>Factors Which May Influence Decisions Affecting Older Workers</td>
<td>9</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>15</td>
</tr>
<tr>
<td>Method</td>
<td>16</td>
</tr>
<tr>
<td>Subjects</td>
<td>16</td>
</tr>
<tr>
<td>Materials</td>
<td>16</td>
</tr>
<tr>
<td>Design and Procedure</td>
<td>18</td>
</tr>
<tr>
<td>Results</td>
<td>20</td>
</tr>
<tr>
<td>Subjects</td>
<td>20</td>
</tr>
<tr>
<td>Order Effects</td>
<td>20</td>
</tr>
<tr>
<td>Test of Hypotheses</td>
<td>21</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Test of Possible Reasons for Decisions</td>
<td>25</td>
</tr>
<tr>
<td>Discussion</td>
<td>28</td>
</tr>
<tr>
<td>Limitations</td>
<td>33</td>
</tr>
<tr>
<td>Summary and Conclusion</td>
<td>34</td>
</tr>
<tr>
<td>Appendix A. Memos and Instructions</td>
<td>36</td>
</tr>
<tr>
<td>Appendix B. Demographic Questionnaire</td>
<td>58</td>
</tr>
<tr>
<td>References</td>
<td>60</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1. ANOVA Summary Table.................................22
Table 2. Mean Scores and Standard Deviations for Older
Workers (non-comparison) by Condition........23
Table 3. Mean Scores and Standard Deviations for Workers
by Condition....................................................24
Table 4. Means for Reason By Condition, Ranked in Order
of Importance....................................................26

LIST OF FIGURES

Figure 1. Means for Reason by Condition...............27
Introduction

At an ever increasing rate, the ranks of the employed are occupied by individuals over age 40. As social security benefits and pension and retirement plans prove to be deficient for keeping up with inflation and as the majority of the population reaches maturity, workers may stay on the job longer (U.S. Gov't report, 1982). It is projected that by the year 2000 the overall composition of the workforce will be significantly older, with 28 percent of the labor force in the 45-54 age range compared to only 17 percent in 1985 (Doering, 1983). Hence, the factors which impact employment decisions about the older worker are likely to be of increased concern to industrial/organizational psychologists and employers.

As has been found with gender and race, a person's age can also lead to the tendency of some to come to erroneous assumptions about one's ability and competence. Despite laws which prohibit discrimination on the basis of age, these assumptions can act as barriers to fair employment practices.

These assumptions (i.e., beliefs or expectations that members of a social group share the same characteristics) (Baron & Byrne, 1987) are referred to as stereotypes. When people have certain beliefs about the nature of old people
as a group they typically will apply those beliefs to any old person regardless of that person's individual characteristics. Some common assumptions are that older people are unhappy, inflexible, have lessened intellectual capabilities, and are non-productive (Levine, 1988). Ageism is the term given to discrimination associated with stereotypes of the elderly. This "ageist" stereotyping affects the way individuals interpret and process information and subsequently the conclusions they draw. Conceivably, then, stereotypical views of older people could influence many employment decisions. Selection, training, and performance appraisal decisions could all be biased by generalized beliefs about the abilities of older workers (Cleveland, Festa, & Montgomery, 1988; Haefner, 1977; Rosen & Jerdee, 1976b).

**Stereotypes And The Older Worker**

Evidence that stereotypes of older workers exist has been confirmed by several researchers. Perry and Varney (1978), for example, investigated attitudes about older workers and found that, although there was no overall negative evaluation, students perceived that older workers made fewer valuable contributions and caught on to new
ideas more slowly, even when there was no basis for assuming that older workers were less competent.

Demonstrating that older workers are the potential victims of discrimination, Rosen and Jerdee (1976a) used an in-basket exercise to examine the influence of age stereotypes on simulated managerial decisions. Fictitious subjects were evaluated on 6 dimensions: resistance to change, lack of creativity, cautiousness, lower physical capacity, disinterest in technological change, and untrainability. The researchers found that stereotypes about the physical, cognitive, and emotional characteristics of the older worker led to discriminatory managerial decisions thereby potentially denying opportunities for older workers.

Using actual employees in a "real world" situation, Ferris, Yates, Gilmore, and Rowland (1985) administered separate performance questionnaires to 81 staff nurses and their supervisors. They found that for workers at the older and younger extremes, ratings which the workers gave themselves were vastly different from those given by their supervisors whereas the evaluations of middle aged workers were most consistent with their supervisor's. Interestingly, when older workers were evaluated by their supervisors as successful, luck, rather than ability, was
cited as the reason. Their younger counterparts' success was attributed to ability by the superiors.

Haefner (1977) interviewed 286 Illinois state employers using a hypothetical selection situation and found that age did affect hiring decisions. Employers were asked to respond, via telephone, to a questionnaire which assessed various characteristics of hypothetical job candidates. Results indicated that employers preferred younger, highly competent individuals over older, highly competent individuals.

Rosen and Jerdee (1976b), in an attempt to increase the understanding of job-related dimensions of age stereotypes, distributed a questionnaire to real estate agents and managerial students. The questionnaire, comparing 30 and 60 year old workers, was based on four work-related scales: performance capacity, potential for development, stability, and interpersonal skills. They found that older workers were perceived to be less capable of effective performance, to have a lower potential for development, and to have less interest in change compared to the younger worker. On the positive side, the older worker was rated higher on the stability dimension.

Kite and Johnson (1986), using meta-analysis techniques, found that attitudes toward the elderly are
generally more negative than attitudes toward younger persons. Their results showed that in work-related settings there were smaller differences between older and younger subjects; however, these differences varied according to design. In field studies the elderly were perceived more negatively than were younger subjects, whereas in laboratory settings evaluations of younger and older subjects were not different.

Performance and the Older Worker

Looking at the aforementioned studies it would seem, perhaps, that stereotypical assumptions about the work-related abilities of the elderly have merit. The truth is there are few concrete conclusions. While there does seem to be a mixed bag of results, much of the evidence suggests that generalized conclusions about the limited performance capabilities of the elderly cannot be substantiated.

It is true that certain areas of functioning tend to decline with age; however, the process begins long before individuals are typically categorized as "old" and long before these declines are seriously evident in performance. As one ages sensory awareness becomes dulled, learning slows, muscle strength declines, and remembering is often more difficult. After the age of sixty measurable losses
in vision due to less flexibility of the lens can be detected (Stevens-Long, 1988). Some loss of hearing may also be experienced as well as a lessened sensitivity to tastes. Sensory and long-term memory may decline with little change in short term memory (Stevens-Long, 1988). A 15-40% decline in muscle strength due to losses of muscle fibre and deterioration of supply system can also be experienced (Welford, 1985). Since fluid intelligence (knowledge dependent upon personal strategy) peaks between twenty and thirty years of age while crystallized intelligence (knowledge obtained through cultural experience) increases as one ages (Ambron & Brodzinsky, 1983, Stevens-Long, 1988), older people may rely more on their crystallized intellectual abilities to solve dilemmas rather than fluid intellectual abilities.

It is important to note that the changes which occur as one ages are gradual and individual and complex. A.T. Welford (1985) said it very well:

...different mechanisms within the human system age to some extent independently and at different rates in different individuals. Add to this that the demands of jobs differ, so that capabilities crucial for one may be irrelevant for others (p.361).
Performance at any age depends upon the physical and mental demands of the task to be accomplished. For those jobs requiring high physical demands, performance can be expected to peak at a young age and for those jobs that rely heavily on experience or accumulated knowledge, performance may be higher as one ages. In addition, practice and familiarity can compensate for slower and less efficient rates of information processing.

As early as 1952 the competence of the older worker was a concern which W.H. Bowers attempted to address. He examined performance appraisals of over 3000 industrial workers and found the age differences in traits were relatively small. While older workers were reported to learn less readily and slower, they showed good attendance, steadiness, and conscientiousness more frequently.

Rhodes (1983), in an attempt to address the age-related differences in work behavior, systematically reviewed more than 185 research studies. Using a theoretical model derived from behavioral psychology to provide an understanding of age-related differences, she outlined the possible causes of age related differences; age effects (biological and psychosocial aging), cohort effects (past environment, experiences), period effects (present environment), and systematic error (research problems).
For the age-performance question, she found the results were mixed. In two out of three studies, when experience effects were controlled for, performance was found to be the same across age groups. Yet the studies generally showed a slowing with age as well as greater variability within age categories for older workers which, depending upon job demands, may or may not affect job performance. An important point to note is Rhodes' acknowledgement of the age-performance studies limitations -- in particular, the reliability and validity of the performance criteria. The question of whether criteria of performance were based on job analyses, the reliability of performance observations, and the possibility of rater bias prevented her from identifying causal factors in the relationship between age and performance. She does, however, conclude that the work behaviors of older workers contribute to effective organizational operations.

More recently, and in response to Rhodes (1983), Waldman and Avolio (1986) conducted a meta-analysis of age differences in job performance. After identifying 13 usable studies with a total of 37 samples plus 3 unpublished samples, the samples were grouped into three categories: supervisory ratings, peer ratings, and individual productivity. Although there were differences
in results depending upon the type of performance measure used, there was not strong support for the assumption that job performance declines with age. In particular, objective performance indices showed that performance increased with age. Interestingly, supervisor ratings showed a small decline in performance with age. The authors noted this decline may be due to bias and perhaps additional evidence for the presence of stereotypes. It should be noted that significant unexplained variance remained, which the authors said may be due to possible moderators. As with the Rhodes study, the research showed that the work behaviors of the older worker contribute to effective organizational functioning.

Factors Which May Influence Decisions Affecting Older Workers

Information effect. One criticism of research focusing on older persons is the methodology used by some experimenters to assess perceptions of older people.

Green (1988) and Kite and Johnson (1988), looking at attitudes and perceptions about the elderly, noted that the use of stereotypes by some may be influenced by the lack of information made available to the subject. Because experiments often use generalized statements rather than
specific information, individuals may be forced to rely on cultural stereotypes to make judgments. Kite and Johnson's (1988) analysis showed that older persons were assessed more negatively than their younger counterparts when specific or individuating information was not provided.

The importance of individuating information was confirmed by the research of Lee and Clemons (1985). In their study, subjects were asked to make decisions about older workers in hypothetical work situations. In the information condition subjects were provided with a job description and a behaviorally stated performance report and in the no-information condition only biographical information was provided. They found that favorable decisions about elderly workers were more likely when behaviorally stated information about the worker was provided.

Comparison. Lee and Clemons (1985) noted that comparing older workers to younger workers may also play a role in bias toward the elderly. When subjects were asked to choose between a younger and older worker, decisions more often favored the younger worker whereas when the decisions were made independently of other candidates, a more favorable decision resulted.
The impact of comparison on the use of stereotypes of the older worker was supported by the findings of Kite and Johnson's (1988) meta-analysis which demonstrated that older people were assessed more negatively when subjects evaluated both young and old targets as opposed to evaluating them separately.

Cleveland, Festa, and Montgomery (1988) noted that the proportion of older workers in an applicant pool may influence decisions regarding older workers. When they manipulated the age of the applicant pool in a simulated personnel decision, they found that older persons were seen as less desirable for employment when the collection of applicants was disproportionately younger. In their study, subjects were asked to make personnel decisions and recommendations about an older applicant out of a pool of eight applications for a job that was age-typed as a younger person's job. The experimenters manipulated the applicant pool such that when the proportion of older applicants increased, the evaluation of the older applicant was more positive. Conversely, when the pool was skewed with younger applicants, the older candidate received less favorable recommendations.

Job stereotypes. In addition to the influences of information and comparison on employment decisions, some
researchers have suggested that job stereotypes and/or status may influence the use of age stereotyping (Singer & Sewell, 1986) and affect employment decisions.

Singer (1986) investigated the extent of age stereotyping according to the profession of the ratee and found that in some professions older persons were judged more unfavorably than their younger counterparts. Using five professional categories, (accountant, university academic, police, medical doctor and computer scientist) Singer found that age stereotyping existed in all four task areas for all the professions. The younger worker was seen as having higher performance capacity, greater potential for development, and better interpersonal skills. Furthermore, the degree of stereotyping differed according to the profession with some professions perceived as stereotypically younger-person jobs and others stereotypically older-person jobs.

Cleveland and Landy (1983) also pointed out that job stereotyping may be a source of bias and thereby influence employment decisions. They proposed that the age stereotype of occupations interacts with the age of the incumbent to bias decisions in the work setting. Their results suggested that when the performance pattern is inconsistent with the age stereotype of the job, employees
receive lower ratings than when behavior is according to the stereotype.

The suggestion that the job itself may be a source of bias appears to be consistent with the idea that some jobs are perceived appropriate for older workers and some appropriate for younger workers. Attempting to provide empirical support for this idea, Cleveland and Landy (1987) asked 120 managers to classify jobs according to their perception of age distribution. Sixty-two percent of the 40 jobs presented could be classified into younger, older, or age-neutral status. A job was defined as a younger person's job when 60 percent of the responses fell into the first three age categories (under 20 to 39 yr.) on a frequency grid questionnaire. When 60 percent of the responses on the grid format questionnaire fell into the last 4 categories (40 to over 70 yr.), the job was classified as an older person's job. A job was classified as age neutral when fewer than 60 percent of the responses failed to cluster at either end of either questionnaire. The authors suggested that research in this area is still preliminary and further investigation is warranted.

Comparing perceptions of students and managers with regard to age perceptions of jobs, Cleveland and Berman's (1987) replication of Cleveland and Landy's (1987) age
perception of jobs study asked students to rate jobs according to the degree which a job was a younger or older person's job. A Pearson correlation indicated substantial agreement between the samples (manager and student) suggesting that external validity is not seriously threatened by the use of students in this type of research.

Attempting to expand the research on age discrimination, and in particular the conclusions of Lee and Clemons (1985), this study proposed to confirm their findings regarding comparison as well as to integrate recent evidence that job status/stereotype can bias employment decisions. Lee and Clemons also examined the effect of performance information on employment decisions; however, consistent with the recommendations of Green (1985), Kite and Johnson (1986), and Waldman and Avolio (1986), it was determined that information about all targets would be provided to deter reliance on stereotypes. Therefore, this replication will examine the influence of comparison on employment decisions affecting older workers, as well as address the influence of job stereotypes on these decisions.
Hypotheses.

**Hypothesis 1:** Consistent with the research of Lee and Clemons (1985), it was hypothesized that older workers in the no comparison conditions would receive more favorable decisions than their counterparts in the comparison conditions.

**Hypothesis 2:** It was hypothesized that an older worker, in a job perceived to be more appropriate for an older person would be judged more favorably than an older worker in a job perceived to be appropriate for a younger person.

**Hypothesis 3:** It was hypothesized that in a job perceived to be appropriate for older workers (Cleveland & Landy, 1987), an older worker when compared to a younger worker in the same job will receive a more favorable decision than the younger worker. In a job perceived to be appropriate for a younger worker (Cleveland & Landy, 1987) the older worker when compared to the younger worker will receive a less favorable decision than the younger worker.
Method

Subjects

Sixty students from a small southwestern university participated as subjects. The forty males and 19 females (1 declined to state his/her sex) ranged in age from 21 to 50 years of age and were recruited from graduate level management courses. All subjects were treated in accordance with the ethical standards of the American Psychological Association.

Materials

Original memos used in Lee and Clemons (1985) study were obtained and modified for this study. Five written memos (see Appendix A) described a hypothetical work situation in which a manager was required to make a decision about a subordinate. With the exception of the second memo (dummy), each memo included a short job description, biographical information, and a moderately positive behaviorally stated performance report for each worker.

Memo 1: This memo described a situation where an older worker is requesting to attend a conference to learn about the latest development in his/her field. The job title of
this employee was director of research and development and was one classified in Cleveland and Landy's study (1987) as a job perceived to be appropriate for older workers. At the bottom of the memo, subjects indicated the probability of approving the worker's request on a 6-point scale ranging from 0 (approval very unlikely) to 5 (approval very likely).

Memo 1a: This memo described a situation where an older worker is requesting to attend a conference to learn about the latest developments in his/her area. The job title of this employee was junior accountant and is one which has been classified as stereotypically younger (Cleveland and Landy, 1987). At the bottom of the memo, subjects indicated the probability of approving the worker's request on a 6-point scale ranging from 0 (approval very unlikely) to 5 (approval very unlikely).

Memo 2 & 2a: The purpose of this memo was to increase the realism and to conceal the true purpose of the task. This memo was a dummy memo depicting a situation where a middle aged employee is requesting permission to transfer to another division.

Memo 3: This memo described a situation in which two workers (one 29 years and the other 57 years) are requesting to attend a training seminar. These workers
were described as senior project engineers (old job stereotype, Cleveland & Landy, 1987). On a separate sheet of paper subjects indicated the probability of approving each worker's request on a 6-point scale for each worker. Subjects were instructed that the sum of the ratings given to the two workers had to equal 5.

**Memo 3a:** This memo described a situation in which two workers (one 27 years and the other 55 years) are requesting permission to represent the unit in a training program. These workers were both described as junior project engineers (young job stereotype, Cleveland & Landy, 1987). On a separate sheet of paper, subjects indicated the probability of approving each worker's request on a 6-point scale for each worker. Subjects were instructed that the sum of the ratings given to the two workers had to equal 5.

**Design and Procedure**

The design of this study was (2) X 2 factorial with repeated measures on type of decision (comparison v absolute). Subjects were randomly assigned to the job stereotype condition. Each subject received a packet of materials containing three memos appropriate to their condition and information materials about their candidates.
In addition to the memos and instructions, a sheet of paper was included in the packet which solicited demographic information, a Likert scale with a list of possible factors used in the decision making process, and current employment status/environment from the subjects (see Appendix B). The order of the first and third memos in each condition was random to counterbalance any order effects. In the comparison memo, the order of the old and young candidates was random to counterbalance any order effects.

Each subject was asked to assume the role of the division manager of a large company. The subjects read each of the memos and indicated his or her decision for each memo according to the instructions. Probability of approving the request for the older worker served as the dependent variable.
Results

Subjects

Sixty-nine memo packets were distributed. Of these, only 60 yielded usable data. Nine subjects' data were discarded. Four subjects failed to respond to one or more of the dependent variables and five others did not comply with the instructions to provide proper ratings for the workers in the comparison condition. Of the 60 subjects who provided usable data, 77% indicated they were currently working, 60% of these fulltime. Mean age was 30 (sd = 6.975)

Order Effects

ANOVA's were conducted to determine if order of the memos or order of the candidates had any effect on decisions made by the subjects. All tests of order effects were not significant.

The results of the first test of order effects, an ANOVA in which probability of approval for the older worker in a non comparison condition served as the dependent variable and order (1st or 2nd) served as the independent variable, found no effect for order \[F (1.58) = 1.207, \text{n.s.}\].
An ANOVA test of order effects in the comparison condition for the younger candidate by order (1st or 2nd) was also not significant \[F (2,56) = .233, \text{n.s.} \].

A third ANOVA, a test of order effects for the older worker in a comparison condition by order was also not significant \[F (2,56) = .233, \text{n.s.} \].

Test of Hypotheses

Hypothesis 1. Consistent with the findings of Lee and Clemons, a paired t-test \[t (59) = 2.17, p<.05 \] revealed a significant effect. As predicted, older workers who were not compared to younger workers, received a more favorable decision \[\text{Mn} = 3.40 \] than older workers who were compared to younger workers \[\text{Mn} = 2.88 \].

Hypothesis 2. The results of a one way ANOVA, testing the hypothesis that an older worker in a stereotypically older job would receive a more favorable decision than an older worker in a stereotypically younger job are presented in Table 1. The results show a significant difference by job condition such that an older worker (non-comparison) in an old job stereotype received a more favorable decision than an older worker (non-comparison) in a stereotypically young job \[F (1,59) = 6.811, p<.05 \]. Means and standard
deviations are presented in Table 2 (High score indicates more favorable decision).

Table 1

ANOVA Summary Table; Approval for Older Worker (non comparison) by Condition

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereotype</td>
<td>1</td>
<td>1.097</td>
<td>1.097</td>
<td>6.811</td>
<td>.0115</td>
</tr>
<tr>
<td>Within</td>
<td>58</td>
<td>93.629</td>
<td>1.611</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 3. A 2x2 (job stereotype x decision) ANOVA with repeated measures for comparison decision tested the interaction hypothesis that older or younger workers in the stereotypically appropriate job would receive more favorable decisions. That is, older workers in appropriate "older jobs" were expected to score higher than older workers in "young jobs". Conversely, younger workers in appropriate "young jobs" were expected to score higher than young workers in "old jobs". This test failed to reveal significance for workers by condition $F(1, 58) = .46324$, n.s.]. Although not hypothesized, the main effect for age of candidate was significant [$F(1, 58) = 5.91$, p<.05].
Mean scores and standard deviations are presented in Table 3.

### Table 3

**Mean Score and Standard Deviations for Workers by Condition**

<table>
<thead>
<tr>
<th></th>
<th>Older Worker</th>
<th>Younger Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>Old Job Stereotype</td>
<td>3.000 (sd.=1.155)</td>
<td>2.000 (sd.=1.154)</td>
</tr>
<tr>
<td>Young Job Stereotype</td>
<td>2.781 (sd.=1.313)</td>
<td>2.218 (sd.=1.313)</td>
</tr>
</tbody>
</table>

An examination of means suggested a difference between old and young candidates in the old job stereotype condition. A $t$-test was conducted and found to be significant [$t (27) = 2.29, p<.05$]. To be consistent, a $t$-test was also performed for the old and young candidates in the young job condition and was not significant, [$t (31) = 1.21, n.s.$].
Test of Possible Reasons for Decisions

In an effort to understand subjects' ratings, subjects were asked to rate importance of reasons for their decisions. Hence, no apriori hypothesis was given. A repeated measures ANOVA, testing for possible explanations for subjects' decisions, evaluated subjects' Likert scale responses to 8 possible reasons for decisions and found a significant effect for the differences in reasons given, \( F(6,49) = 32.15, p < .001 \). There was no effect for reason by condition \( F(6,49) = 1.06, \text{n.s.} \). The table of means and the pattern of results are shown in Table 4 and Figure 1. Because of the exploratory nature of this analysis, ANOVAs were performed for reasons by condition. Of the 8 possible reasons given, only cost was significant by condition \( F(1,54) = 4.18, P < .05 \). Subjects indicated cost to be significantly more important for candidates in the old job stereotype condition than in the young job stereotype condition.
Table 4

Means For Reason by Condition, Ranked in Order of Importance

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>old job</th>
<th>young job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>1.482</td>
<td>1.462</td>
<td>1.500</td>
</tr>
<tr>
<td>Future w/ Org.</td>
<td>2.250</td>
<td>2.270</td>
<td>2.233</td>
</tr>
<tr>
<td>Education</td>
<td>2.768</td>
<td>2.654</td>
<td>2.866</td>
</tr>
<tr>
<td>Cost to Org.</td>
<td>2.911</td>
<td>2.654</td>
<td>3.133</td>
</tr>
<tr>
<td>Years w/ Org.</td>
<td>2.802</td>
<td>3.000</td>
<td>2.633</td>
</tr>
<tr>
<td>Job Title</td>
<td>2.802</td>
<td>3.000</td>
<td>2.633</td>
</tr>
<tr>
<td>Age</td>
<td>3.303</td>
<td>3.307</td>
<td>3.300</td>
</tr>
<tr>
<td>Gender</td>
<td>4.268</td>
<td>4.269</td>
<td>4.266</td>
</tr>
</tbody>
</table>

1 = very important

5 = not at all important
Figure 1. Means for Reason by Condition

1 = very important
2 = somewhat important
3 = important
4 = not very important
5 = not at all important
Discussion

As predicted, the results of the first hypothesis were consistent with the findings of Lee and Clemons (1985). The present study found that more favorable decisions were made about older workers when a choice between older and younger workers was not required. These findings support Kite and Johnson's (1986) meta analysis which concluded that older people are assessed more negatively when in a comparison situation with younger people. Cleveland, Festa and Montgomery's (1988) suggestion that age influences personnel decisions was also supported.

It is interesting to note that subjects were influenced by the comparison despite the fact that performance, education, and gender were equivalent between the two employees. Age of the candidates was similar, although in the non comparison condition the worker was described as 59 years of age and in the comparison condition the worker was 57. Perhaps, age is relative. When judged independently, 59 doesn't seem so old, however, 57 compared to 29 may seem ancient.

Confirming previous implications that job appropriate perceptions may influence the use of stereotypes (Cleveland & Berman, 1987, Cleveland & Landy, 1983, 1987, Singer, 1986, Singer & Sewell, 1986), this study found that older
workers in age appropriate jobs received more favorable decisions than older workers in stereotypically inappropriate jobs. Using Cleveland and Landy's (1986) job classifications, subjects indicated a willingness to approve older workers requests when the older worker was in a job considered appropriate for an older person. This occurred even though gender, age, education level, years with the organization, and performance were held constant. Essentially, the only difference between the two workers was job title. It should be noted, however, that the stereotypically young job titles in Cleveland and Landy's study (1987) were all preceded with "junior" which in and of itself may evoke youthful images and demote the position. Future research would benefit from a more comprehensive list, if one exists, of jobs which are typically identified with the young, but do not obviously trigger sterotypical responses.

Looking at the variance in scores for the old and young job stereotype condition, it appears subjects were less consistent in their decisions when they evaluated candidates in the young job stereotype condition. They may have had some difficulty making a decision when the older person was in the stereotypically "inappropriate" job.
No significant effect was found for the interaction hypothesis, suggesting subjects were not consistent in the application of job stereotypes. This was consistent with Cleveland and Landy's (1983) study which examined the effect of job stereotype on personnel decisions. They too, found no interaction for job by age. It appears stereotypes were applied differently for young and old such that older candidates received a more favorable judgement in the old job stereotype condition but young candidates did not receive a more favorable decision in the young job stereotype condition. Perhaps stereotypical assumptions about the age appropriateness of certain jobs is more ingrained for typically older jobs than typically younger jobs.

There was a main effect for age of the candidate, indicating that, overall, older workers received more favorable decisions. It was not expected that older workers would be received so well, particularly in the young job stereotype condition. Partially supporting the interaction hypothesis, post hoc t-tests revealed that the older worker fared significantly better than the younger in the old job stereotype condition. Interestingly, the younger worker did not receive the same advantage in the young job stereotype, although mean scores for the younger
worker were higher in the age appropriate job stereotype. It appears older workers are acceptable in jobs traditionally perceived to be appropriate for younger workers as well as jobs previously identified as appropriate for older workers, however, for younger workers the reverse did not hold up. Maybe, this has more to do with a status/stereotype interaction. In this study, the old job title in the comparison condition was senior project engineer. Perhaps "senior" biased the results against the younger worker. Interestingly, this did not occur in the young job stereotype condition where the job title was "junior" project engineer. However, when asked for reasons for decision, subjects did not indicate that job title was very important.

Again, future study of job stereotypes may want to take into account not only job stereotypes but also the status associated with a title. With the influx of senior citizens in entry level/service jobs, such as McDonalds and Target, perceptions of status may be changing at the lower end of the status continuum, possibly benefitting the older worker. The upper echelon of status jobs, however, may still be reserved for those more experienced with life.

In addition to status, other variables may influence the stereotyping of a job. For example, jobs that require
a substantial amount of physical strength, or work that necessitates sharp visual acuity may have stereotypes associated with them based on the perceived requirements of the job and the age appropriateness associated with accomplishing the tasks of the job.

Another possible explanation for the lack of interaction may be the presence of performance information. As noted by Kite and Johnson (1988) and Green (1981), evaluations of older workers are more positive when individuating information is provided. In an actual work situation, it is highly probable that individuals rendering the types of decisions required in this study will have individuating information available to them. In a selection situation, however, it is less likely that performance related information will be readily available and thus stereotypical notions about age may be more evident.

The attempt made to understand factors which may have contributed to subjects decisions was not very enlightening. While there were significant differences between the different reasons, indicating that subjects felt some factors were more important than others, there was not significance, overall, for reason by condition.
Thus, it appears subjects applied the same criteria to old and young employees.

Subjects consistently felt that performance influenced their decisions the most and age and gender the least. This result is interesting, considering performance and gender were held constant across all conditions and in the comparison condition, only age was different.

Limitations

As cited before, the use of "junior" and "senior" may have unintentionally biased the subjects' perceptions. It is suggested that future research avoid using such titles.

Although Cleveland and Berman (1987) found that managers and students categorized old and young jobs similarly, for the sake of generalization, it would be beneficial if these findings were replicated using a managerial sample.

Because the focus of this study was the older worker, an absolute condition with a younger worker was not included in the design. To be thorough, including this feature would have permitted the comparison of a younger worker in comparison/non comparison situation and shown whether both older and younger workers were at a disadvantage when compared.
Summary and Conclusion

With the demographics of the workforce changing, it is important to go beyond just knowing that stereotypes exist and determine what circumstances influence discrimination. Identifying the extent to which age comparisons and job stereotype contribute to discrimination will hopefully add to understanding the unique problems encountered by older workers and lead to finding effective solutions. After all, diagnosing an illness without recommending treatment is of little use. With this in mind, it is recommended that future research focus on the merits of educating the working public about the advantages of older workers ie., less absenteeism, lower turnover, their ability to mentor, and showing younger workers the ropes.

It should also be noted that the younger workers in this study did not do well. Although they were not the focus of this research, several factors may have contributed to this. The older workers in this study were not terribly old and perhaps did not fit the subjects perception of "old". Indeed, the graying of America, increased exposure and interaction with active grandparents and fellow employees and the positive portrayal of the
elderly in the media may have worked against the younger employees portrayed in this study.

Despite the positive decision for the older workers in the stereotypically appropriate job, it is still important to acknowledge that scores for older workers dropped significantly when they were in a comparison situation rather than judged independently. Clearly, for both younger and older workers, decisions should be on a basis other than chronological age.
Appendix A

Memos and Instructions
General Instructions

You are to assume the role of Division Manager for a large company. The following three memos require you to make personnel decisions. Accompanying each memo is a set of instructions as well as information to assist you in making your decision. Thank you for your voluntary participation.
Memo 1

Instructions

On the following pages is a memo from your Director of Research and Development requesting to attend a conference. Please review the memo and the accompanying information. Be sure to consider all information provided to you before making your decision.

re: Paul Smith

Job Description for Director of Research and Development

Research and development directors direct and coordinate activities concerned with research and development of new concepts, ideas, basic data on, and applications for an organization's products, services, or ideologies. Their responsibilities include planning and formulating aspects of research and developing, reviewing and analyzing proposals submitted to determine if benefits derived and possible applications justify expenditures.
PAUL SMITH

Personal Data

Job Title: Director of Research and Development

Sex: Male

Age: 59            Birthdate: 1/10/31

Educational Level: B.S. in engineering

Date employed: February 17, 1983

Yrs with company: 7

Performance Report

submitted 12 - 5 - 89 by Jerry Carter, V.P. Engineering

1. Quality of work - Paul consistently submits quality proposals for research and development. His ideas are typically well thought out and he effectively directs and coordinates development of new concepts.

2. Knowledge of current research - Paul appears to be aware of current findings in research and is a good resource within the organization.

3. Ability to work with others - Paul is respected among his peers. He communicates well within all levels of the organization and is able to successfully convey his proposal ideas to other employees for implementation.
To: Division Manager

From: Paul Smith, Director of Research and Development

I request permission and financial support to attend a conference in Seattle, Washington between May 7-10. The purpose of the conference is to discuss the latest product developments as well as recent research findings.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>250.00</td>
</tr>
<tr>
<td>Lodging</td>
<td>175.00</td>
</tr>
<tr>
<td>Meals</td>
<td>125.00</td>
</tr>
<tr>
<td>Registration</td>
<td>35.00</td>
</tr>
<tr>
<td>Misc.</td>
<td>35.00</td>
</tr>
</tbody>
</table>

Total 620.00

Using the scale below, please circle the choice that best indicates the probability of your approval.

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely
Instructions

On the following pages is a memo from your Junior Accountant requesting to attend a conference. Please review the accompanying information. Be sure to consider all the information provided to you before making your decision.

re: Bob Chase

Job Description for Junior Accountant

A junior accountant keeps accounts and records, or performs such bookkeeping activities as recording disbursements, expenses, and tax payments. They prepare individual, division, or consolidated balance sheets to reflect the company's assets, liabilities, and capital. They may also prepare profit and loss statements, audit contracts, orders and vouchers, and prepare reports to substantiate individual transactions prior to settlement.
Bob Chase

Personal Data

Sex: Male
Age: 59 Birthdate: 1/10/31
Educational Level: B.S. in Administration (accounting)
Date employed: February 17, 1983
Yrs with company 7

Performance Report

submitted 2/21/89 by Tom Nixon, V.P. Finance

1. Quality of work - Bob's accounts and records appear to be in order. He effectively prepares profit and loss statements within his area of supervision and consistently produces high caliber work.

2. Knowledge of company policies and procedures - Bob appears to be well aware of how the organization operates and what is expected of him.

3. Ability to work with other - Bob is respected among his peers. He communicates well within all levels of the organization and is able to successfully work with other employees.
To: Division Manager

From: Bob Chase, Junior Accountant

I request permission and financial support to attend a conference in Seattle, Washington, between May 7-10. The purpose of the conference is to discuss the tax laws and how they affect large corporations such as ours.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>250.00</td>
</tr>
<tr>
<td>Lodging</td>
<td>175.00</td>
</tr>
<tr>
<td>Meals</td>
<td>125.00</td>
</tr>
<tr>
<td>Registration</td>
<td>35.00</td>
</tr>
<tr>
<td>Misc.</td>
<td>35.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>620.00</strong></td>
</tr>
</tbody>
</table>

Using the scale below, please circle the choice best indicates the probability of your approval.

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely
Memo 2 & 2a

Instructions

On the following pages are 2 memos from Unit C. Please review the memos and the accompanying information. Be sure to consider all the information provided to you before making your decision.

re: John Bishop
JOHN BISHOP

Personal Data
Sex: Male
Age: 35 Birthdate: 7/23/54
Educational Level: B.A. Industrial Technology
Date employed: November 18, 1987
Yrs with company: 2

Performance Report
submitted 11 - 18 - 89 by Dick Williams, Unit C supervisor

1. Quality of work - John's work is adequate, however, he needs to show improvement in his application of technical knowledge.

2. Knowledge of Policies and Procedures - . Although he is well aware of company policies and procedure in the laboratory, John's work does not always comply with standards.

3. Ability to work with others - John's behavior is below expectations. For the most part, John works independently and does not make good use of his fellow employees. John could show some improvement in this area.
To : Division Manager
From : John Bishop, Laboratory Assistant

I'm sure you're aware by now of the ongoing conflict between one of my fellow workers and myself. The friction between us is not only affecting our work, but the out-put of our entire unit as well. For these reasons, I'm requesting a transfer into another division. I feel this is the best and only solution for the company as well as myself. I hope that you will carefully consider my request.
To : Division Manager
From : Tom Williams, Unit C supervisor

You have probably received a memo from John Bishop, an employee in my unit, requesting a transfer. I realize that the working atmosphere of the unit is a little strained to say the least, but I have strong reservations about the transfer. Our unit has been understaffed for six months and the prospect of losing a worker now is less than appealing. Please consider my predicament when making your decision.

Based on the information provided, would you transfer?

_____yes_____no
Memo 3

Instructions

You, as division manager, must choose between two of your employees who have expressed an interest in attending a product testing and training program. Their names are Tom Wilson and David Blake and they are both senior project engineers. Please review the following memo and accompanying information. Be sure to consider all information provided to you before making your decision.

Job Description for Senior Project Engineer

A senior project engineer directs, coordinates, and exercises functional authority for planning, organization, control, integration and completion of, engineering project within area of responsibility. Some of their responsibilities include: review product design for compliance with engineering principles, company standards and customer contract specifications; evaluate and approve design changes, specifications, and drawing releases; is concerned with resolving engineering design and test problems; and prepares interim and completion project reports.
To: All Division Managers  
From: Richard Thomas, Vice President

The new product line that the company has decided to promote is in the final stages of approval. An in-house demonstration, testing, and evaluation program is scheduled for Monday the 30th for division representatives. To prevent manpower shortages resulting from the necessity to take program participants off the job, we are requesting that only one employee from each division be allowed to participate.

In choosing the employee to represent your division, keep in mind the fact that he/she will be responsible for not only learning the necessary information but also for accurately disseminating this information to his/her coworkers and group members.

We anticipate the product implementation will be a smooth one because of this collective process. Please emphasize its importance to your employees.
DAVID BLAKE

Personal Data
Sex: Male
Age: 29 Birthdate: 2/27/61
Education Level: B.S. engineering
Date employed: June 9, 1985
Yrs with company 5

Performance Report
submitted 6/12/89 by Jerry Carter, V. P. Engineering

1. Quality of work - The projects under David's supervision are well planned and typically completed on time. He effectively uses his knowledge of engineering to solve design problems and implements necessary changes. David's reports are complete.

2. Ability to work with others - David's interaction with his fellow workers corresponds to the goals of the organization and is consistent with the timely completion of projects.
TOM WILSON

Personal Data

Sex: Male
Age: 57 Birthdate: 3/18/33
Educational Level: B.S. engineering
Date employed: May 10, 1985
Yrs with company: 5

Performance Report

submitted 5/13/89 by Jerry Carter, V.P. Engineering

1. **Quality of work** - Tom's projects to date have been completed according to budget. His reports are thorough and well prepared. His knowledge of engineering principals and company standards is good and he seems to excel at troubleshooting design problems.

2. **Ability to work with others** - Tom works well with the engineering staff. His positive interaction with others allows him to get the job done and is consistent with the company's motto of cooperation.
Using the scale below, please circle the choice that best indicates the probability of your approval. Because only one candidate can attend, it is important that the total of the two workers ratings must equal 5.

re: Tom Wilson

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely

re: David Blake

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely
Instructions

You, as division manager, must choose between two of your employees who have expressed an interest in attending the product testing and training program. Their names are Tom Wilson and David Blake and they are both junior project engineers. Please review the following memo and accompanying information. Be sure to consider all information provided to you before making your decision.

Job Description for Junior Project Engineer

A junior project engineer assists the senior project engineer who directs, coordinates and exercises functional authority for planning, organization, control, integration and completion of, engineering project within area of responsibility. Some of the junior project engineer's responsibilities include: Review product design for compliance with engineering principles, company standards and customer contract specifications; evaluate and approve design changes, specifications, and drawing releases; is concerned with resolving engineering design and test problems; and prepares interim and completion project reports.
To: All Division Managers
From: Richard Thomas, Vice President

The new product line that the company has decided to promote is in the final stages of approval. An in-house demonstration, testing, and evaluation program is scheduled for Monday the 30th for division representatives. To prevent manpower shortages resulting from the necessity to take program participants off the job, we are requesting that only one employee from each division be allowed to participate.

In choosing the employee to represent your division, keep in mind the fact that he/she will be responsible for not only learning the necessary information but also for accurately disseminating this information to his/her coworkers and group members.

We anticipate the product implementation will be a smooth one because of this collective process. Please emphasize its importance to your employees.
DAVID BLAKE

Personal Data
Sex: Male
Age: 29 Birthdate: 2/27/61
Education Level: B.S. engineering
Date employed: June 9, 1985
Yrs with company 5

Performance Report
submitted 6/12/89 by Jerry Carter, V. P. Engineering

1. Quality of work - The projects under David's supervision are well planned and typically completed on time. He effectively uses his knowledge of engineering to solve design problems and implements necessary changes. David's reports are complete.

2. Ability to work with others - David's interaction with his fellow workers corresponds with the goals of the organization and is consistent with the timely completion of projects.
TOM WILSON

Personal Data
Sex: Male
Age: 57 Birthdate: 3/18/33
Educational Level: B.S. engineering
Date employed: May 10, 1985
Yrs with company: 5

Performance Report
submitted 5/13/89 by Jerry Carter, V.P. Engineering

1. Quality of work - Tom's projects to date have been completed according to budget. His reports are thorough and well prepared. His knowledge of engineering principals and company standards is good and he seems to excel at troubleshooting design problems.

2. Ability to work with others - Tom works well with the engineering staff. His positive interaction with others allows him to get the job done and is consistent with the company's motto of cooperation.
Using the scale below, please circle the choice that best indicates the probability of your approval. Because only one candidate can attend, it is important that the total of the two workers ratings must equal 5.

re: Tom Wilson

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely

re: David Blake

0 = approval very unlikely
1 = approval unlikely
2 = approval somewhat unlikely
3 = approval somewhat likely
4 = approval likely
5 = approval very likely
Appendix B

Demographic Questionnaire
Please answer the following questions as they apply to you.

1. Age __ years
2. Sex __F __M
3. Education __undergraduate __graduate

Using the following scale, please indicate how important the following factors were to your decision.

1 = very important
2 = important
3 = somewhat important
4 = not very important
5 = not at all important

<table>
<thead>
<tr>
<th></th>
<th>very important</th>
<th>not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender of candidate</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. Age of candidate</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. Job title</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. Years with organization</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. Cost of program</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6. Education level of candidate</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. Candidates future with org.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8. Candidates performance</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>9. Are you currently employed?</td>
<td>yes no</td>
<td>full time part time</td>
</tr>
</tbody>
</table>

If yes, what is the total number of years you have worked since high school? _______________________

10. In your current job, what is the proportion of employees in the following age ranges? (total 100%)
    ______ 20-30 ______ 30-40 ______ 40-50 ______ 50-60 ______ 60-70 ______ 70+
References


60


