

# Estimation of career potential based on age, sex, and personality information

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In two experiments, college students were asked to rate estimated degree of career success for a series of stimulus persons described by personality-trait adjectives. Experiment 1 also included sex of stimulus persons and Experiment 2 included sex and age of stimulus persons in the descriptions. In both experiments, the descriptions were varied systematically in number, polarity (positivity or negativity), and extremity of adjectives. Male stimulus persons were rated significantly higher than female stimulus persons and younger stimulus persons were rated significantly higher than older stimulus persons on the average. The difference due to sex of stimulus person was a decreasing function of, while the difference due to age was unrelated to, number of adjectives. Both the sex and age effects interacted in complex ways with polarity and extremity of adjectives.

There have been a large number of studies of the process by which individuals combine different items of information in arriving at some type of judgment concerning a person. Most of the studies have used personality-trait descriptive adjectives as the items and likability as the characteristic to be rated. In the studies reported here, stimulus persons were described in terms of both personality-trait adjectives and what might be termed demographic characteristics, specifically, sex and age, and were rated on expected degree of success in a career involving interaction with others. The study was designed to assess the effects on the ratings of sex and age of the stimulus persons, and their possible interactions with sex of subjects and with the following characteristics of the adjective descriptions: number, polarity (positivity or negativity), and extremity of adjectives. It was hoped that the information gained would be useful in developing a model to account for the joint effects of these two different types of information (personality and demographic) on the assessments.

## EXPERIMENT 1

### Method

**Subjects.** The subjects were 80 college students, 40 women and 40 men, fulfilling a research participation requirement in introductory psychology.

**Materials and Procedure.** Each subject received 12 practice trials followed by 96 main trials. On each trial, the stimulus person was a woman or man presumably described by acquaintances as having the designated personality traits. The adjectives used in constructing descriptions were taken from four value ranges as determined by Anderson's (1968) ratings:

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extremely positive, moderately positive, moderately negative, and extremely negative.

Each description on the main trials included two, three, or six adjectives, all from the same value range; the descriptions were balanced so that all adjectives appeared with equal relative frequencies within the two-, three-, and six-adjective sets of descriptions. Each subject received half of the descriptions for a male stimulus person and half for a female stimulus person; the description-sex combinations were counterbalanced across subjects.

The particular adjectives used and the details of construction and presentation of the stimuli were the same as those used by Shaffer (1977, Experiment 1).

**Design.** The experiment was carried out in an equal-N mixed analysis of variance design, with two between-subjects factors: sex of subject (SS) and list combination (LC, designating which adjective descriptions were combined with male and which with female stimulus persons); and four within-subjects factors: sex of stimulus person (SP), positivity or negativity of adjectives (PN), moderate or extreme values of adjectives (ME), and number of adjectives (NA).

### Results

Male stimulus persons were rated higher, on the average, than female stimulus persons [ $F(1,76) = 10.56$ ,  $p < .002$ ]. This effect did not interact with value or extremity of adjectives, nor with their interaction [ $F(1,76) = .29, 1.14, \text{ and } .06$ , respectively], but it did interact significantly with the number of adjectives [ $F(2,152) = 5.96$ ,  $p < .01$ ]. While the difference between male and female stimulus persons was virtually identical for two- and three-adjective descriptions, it disappeared for six-adjective descriptions.

The difference in mean rating for male and female stimulus persons was in the same direction for both male and female subjects, but was greater for male subjects; the interaction between sex of stimulus person and sex of subject approached significance [ $F(1,76) = 2.88$ ,  $.10 > p > .05$ ]. Separate analyses indicated that the effect of sex of stimulus person was significant for male subjects [ $F(1,38) = 11.20$ ,

**Table 1**  
**Mean Rating for Male Stimulus Persons Minus Mean Rating for Female Stimulus Persons as a Function of Sex of Subject and Number of Adjectives**

Sex of Subject	Number of Adjectives		
	2	3	6
Female	.401	.333	-.044
Male	1.147	1.324	-.269

$p = .002$ ], but not for female subjects [ $F(1,38) = 1.31$ ], and that the interaction of the effect with number of adjectives was significant only for male subjects.

The difference between the means for male and female stimulus persons as a function of sex of subject and number of adjectives is given in Table 1.

## EXPERIMENT 2

### Method

**Subjects.** The subjects were 84 college students, 42 women and 42 men, fulfilling a research participation requirement in introductory psychology. Their ages ranged from 18 to 32 years; 93% were 21 or younger.

**Materials and Procedure.** The general description of the materials and procedure in Experiment 1 applies also to Experiment 2, with two differences: Adjective descriptions on the main trials in Experiment 2 contained either two or four adjectives (rather than two, three, or six adjectives), and age designations were added to the descriptions of the stimulus persons—each was described as a woman or man in her (his) early 20s, late 30s, or early 50s. Each subject received one-third of the descriptions for each age specification; the description-sex-age combinations were counterbalanced across subjects.

The particular adjectives used and the details of construction and presentation of the stimuli were the same as those used by Shaffer (1977, Experiment 2).

**Design.** The experiment was carried out in an equal-N mixed analysis of variance design, with three between-subjects factors: sex of subject (SS), list-sex combination (LS, see LC of Experiment 1), and list-age combination (LA); and five within-subjects factors: sex of stimulus person (XS), age of stimulus person (AS), positivity or negativity of adjectives (PN), moderate or extreme values of adjectives (ME), and number of adjectives (NA).

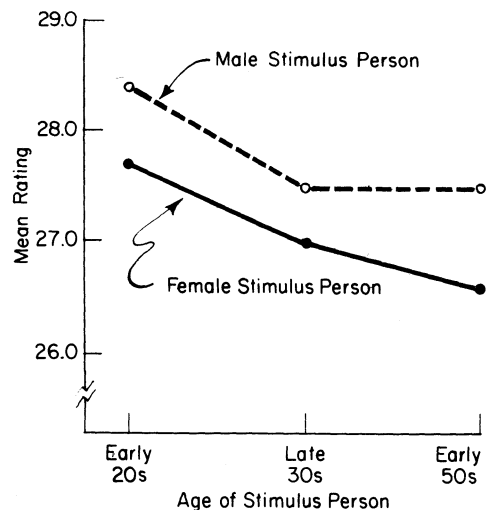
### Results

Figure 1 illustrates the overall mean ratings of stimulus persons by sex and age. The effects of both sex and age of the stimulus person were significant [ $F(1,72) = 10.61$ ,  $p = .002$ , and  $F(2,144) = 4.91$ ,  $p = .009$ , respectively]. Male stimulus persons were evaluated more highly than female stimulus persons, and the mean ratings decreased as the stimulus persons increased in age. Although inspection of Figure 1 suggests that the sex effect might increase with age, statistical analysis indicates that the sex and age effects are additive; that is, there is no Sex by Age interaction [ $F(2,144) = .73$ ]. Contrary to the results of Experiment 1, there is no evidence that the size of the sex or age effect is related to the sex of the subject [ $F(1,72) = .005$ , and  $F(2,144) = .13$ , respectively].

While the size of the sex effect was not different for positive and negative adjectives [ $F(1,72) = .26$ ], nor for moderate and extreme adjectives [ $F(1,72) = 1.90$ ], it was very strongly affected by the PN by ME interaction [ $F(1,72) = 16.83$ ,  $p < .001$ ]. Similarly, with respect to age, while there was a nonsignificantly greater age effect with negative than positive adjectives [ $F(2,144) = 1.52$ ] and only a borderline significant difference in the direction of a greater age effect for extreme than for moderate adjectives [ $F(2,144) = 3.29$ ,  $p = .04$ ], there was a highly significant interaction of the age effect with PN by ME [ $F(2,144) = 7.86$ ,  $p = .001$ ]. Inspection of the means by sex revealed that there was a considerably greater mean for male than for female stimulus persons for extremely negative and moderately positive adjective descriptions, while the difference was very much smaller for extremely positive and moderately negative adjective descriptions. With respect to age, the differences in favor of younger stimulus persons were of about the same magnitude for extremely positive, extremely negative, and moderately negative adjective descriptions, but were virtually zero (and in fact showed a slight although insignificant reversal) for moderately positive adjective descriptions.

The interaction between the sex of the stimulus person and the number of adjectives was of borderline significance [ $F(1,72) = 3.31$ ,  $p = .07$ ]; with a greater effect of sex for two-adjective than for four-adjective descriptions. There was no difference in the age effect for two- and four-adjective descriptions [ $F(2,144) = .40$ ].

Treating the three age ranges as equally spaced, all age effects discussed above were analyzed for significance of linear and quadratic components, in order to check on the interpretations. In all cases, the conclusions stated were supported by the results of



**Figure 1.** Mean ratings of stimulus persons by sex and age, Experiment 2.

analyses of the linear components, and no qualifications based on the quadratic components are necessary.

### SUMMARY AND DISCUSSION

Sex and age of stimulus persons appear to have additive effects on ratings of expected career success, with male stimulus persons expected to be more successful than female stimulus persons, and younger stimulus persons expected to be more successful than older ones. These differences were found for both male and female subjects.

In both experiments, the effect of sex decreased as the number of adjectives increased. Age was varied only in Experiment 2, and its effect there was independent of number of adjectives. However, Experiment 2 contained only two- and four-adjective descriptions; it would be desirable to include greater variation in number of adjectives before drawing general conclusions on the relation between the number of adjectives in a description and the effect of age.

In Experiment 2, both sex and age of stimulus person interacted in rather complex ways with polarity and extremity of adjectives. Development of a model will require further investigation of these interactions. In particular, it would be desirable to determine to what extent the differences due to sex and age are functions of the specific adjectives in the descriptions. The studies reported here did not include single-adjective descriptions and thus do not provide direct evidence on the effects of individual adjectives.

### REFERENCES

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