ABSTRACT
        Physical appearance is not the only source of
information that individuals use when making judgments of others.
Names also may influence impression formation. This study was
conducted to examine the interactive effects of names and facial
structure on perceptions of others and job hiring recommendations. It
was hypothesized that coldness and warmth of names would modify
impressions of baby- and mature-faced job applicants and would
produce interactive effects on job hiring decisions. College students
(N=78) judged the hirability and traits of job candidates whose name
warmth (judged on a 7-point scale) and face type were systematically
varied. The results indicated that applicants with warm names were
seen as weaker and less capable, but warmer and more honest, than
applicants with cold names. Name warmth interacted with face type, as
warm names lowered the typical perceptions of strength and capability
of mature-faced people. Specifically, mature-faced job applicants
with warm names were seen as possessing fewer leadership
capabilities, as weaker, warmer, and more capable for a job requiring
warmth than were mature-faced applicants with cold names. Trait
perceptions of the applicants replicated previous research, but were
affected by name warmth in some cases. The findings can be viewed
within a framework suggesting that facial structure and warmth of
names may influence not only perceivers' impressions but their
behavioral decisions as well. (Author/NB)

The Effects of Face Type and Name Warmth on Job-Hiring Decisions

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Running Head: FACE AND NAME EFFECTS

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78 subjects judged the hirability and traits of job candidates whose name warmth and face type were systematically varied. The results indicated that applicants with warm names were seen as weaker and less capable, but more warm and honest, than applicants with cold names. Name warmth interacted with face type, as warm names lowered the typical perceptions of strength and capability of maturefaced people. Specifically, maturefaced job applicants with warm names were seen as possessing fewer leadership capabilities, as weaker, warmer, and more capable for a job requiring warmth than were maturefaced applicants with cold names. Trait perceptions of the applicants replicated previous research, but were affected by name warmth in some cases. The results are discussed within a framework that suggests that facial structure and warmth of names may influence not only perceivers' impressions but their behavioral decisions.

The Effects of Face Type and Name Warmth on Job-Hiring

Decisions

What kind of nonbehavioral information leads us to form impressions of others? Research has examined many cues, such as written, biographical information (i. e., status, job) and physical appearance (i. e., attractiveness, facial structure, gender) that influence perceivers forming impressions of others (Zebrowitz, Tenenbaum, & Goldstein, 1991). Facial structure is an important physical characteristic that impacts person perception. Particularly, maturefaced persons are viewed as cold, physically strong, shrewd, and capable, whereas babyfaced persons are seen as warm, physically weak, naive, and submissive (Berry & Brownlow, 1989; Berry & McArthur, 1985; 1986). Adults with immature facial features (i. e., large, round eyes; small nose and chin) are perceived to have child-like psychological attributes (Berry & McArthur, 1986), whereas people with mature features (i. e., defined chin and face shapes; smaller eyes) are not seen as psychologically babyish. Moreover, these effects hold true for perceivers and targets of different ages (Montepare & McArthur, 1989), and cultures (Zebrowitz-McArthur & Berry, 1987).

Physical appearance is not the only source of information that perceivers use when making judgments of others. For example, names also influence impression formation. Research (e. g., Lawson, 1971, 1980; Lawson & Roeder, 1986) has revealed

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that agreement exists about the evaluation and stereotypes of first names, and that perceivers form positive evaluations of others holding common names. Moreover, social desirability is positively related to the commonness of names, and loneliness is negatively related to commonness (Crisp, Apostal, & Luissenheide, 1984; Bell, 1984; Hensley & Spencer, 1985). The existence of name effects on judgments of others extends beyond the first impression stage to behavioral judgments, as less formal names produce perceptions of lesser competence (Agatstein & Agatstein, April, 1988), more sincerity (Collins, Jones, & Ramirez, March, 1991), and less persuasion (Collins et al., 1991).

The effects of both names and facial structure have been independently examined in studies concerning judgments of qualifications for jobs. Formal names lead to higher confidence in the judgment of qualification, such that formal names are perceived as more competent and credible (e. g., Agatstein & Agatstein, April, 1988; Collins et al., 1991). As for facial appearance, maturefaced applicants are favored for jobs requiring shrewdness and leadership, whereas their babyfaced counterparts are chosen for jobs requiring warmth and submission (Zebrowitz et al., 1991). While the independent impact on perceptions of both of these variables has been documented, the joint effects of these variables have not been examined. The purpose of the present study was to examine the interactive effects of these two variables on perceptions of others and job hiring

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recommendations. It was hypothesized that coldness and warmth of names would modify impressions of baby- and maturefaced job applicants, and would produce interactive effects on job hiring decisions. Specifically, it was hypothesized that a cold name would modify the typical warm and weak perceptions of babyfaced job candidates, making the candidates seem colder, more able, more shrewd, and physically stronger. On the other hand, it was predicted that warm names would change the perceptions of the maturefaced, making these people seem warmer, less competent, more naive, and more honest.

Method

Pretesting and Selection of Stimulus Materials

Names Fifteen volunteers (9 female, 6 male) rated the warmth of the 50 most popular female names taken from a baby book using a 7-point scale (scale endpoints labeled "very cold/very warm"), and judged the commonness of each, indicating their choice with a number from 1 (not at all common) to 7 (very common). The name judgments were deemed reliable (alpha= .62), and thus mean judgments of warmth and commonness were calculated. Two cold female names (Nicole $\underline{M}$ warm = 2.80 and Crystal $\underline{M}$ warm = 2.67) and two warm female names (Amanda $\underline{M}$ warm = 5.67 and Heather $\underline{M}$ = 5.13) were chosen as name stimuli for the main experiment. Because commonness affects judgments (e. g., Lawson, 1971; 1980) all those names chosen had approximately equal common ratings (Amanda $\underline{M}$= 3.67, Heather $\underline{M}$ common = 4.47, Crystal $\underline{M}$ = 3.40, and

Nicole $\underline{M}$ common = 4.27).

Faces. Twenty subjects (6 male, 14 female) rated a sample of young womens' faces previously utilized by Zebrowitz et al. (1991). Subjects judged the age, attractiveness, babyfacedness, and warmth of the 15 faces, with the appearance ratings presented in a counterbalanced order. The judgments were reliable (alphas ranged from .79 to .90), and a mean rating on all four dimensions was calculated for all faces. Two mature/cold and two babyish/warm faces (these factors covary naturally) approximately equal in age and attractiveness, were chosen based on the mean facial ratings. Warmth and facial appearance ratings of these faces fell outside of a 1 $\underline{s}$ range (meaning that the faces were the extremes of babyishness/warmth and maturity/coldness), while the age and attractiveness judgments fell within 1/2 to 1 $\underline{s}$ of the mean for attractiveness and age ratings.

Main Experiment

Subjects. A total of 78 subjects (39 males and 39 females) participated in this experiment for course credit. The subjects were randomly assigned into 32 groups following a 2 (Subject Gender) x 2 (2) (Example Nested in Applicant's Facial Maturity) x 2 (2) (Example of Name Nested in Warmth of Applicant's Name) completely between subjects factorial design.

Procedure. Each subject was presented a folder with instructions and two job descriptions stapled to the front cover. The instructions indicated that their task was to give hiring

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recommendations and to examine the job information completely before going on to make judgments. The subjects also were told that while making their judgments they could refer back to the autobiographical data as needed, and were instructed to finish one page of ratings before going on to subsequent pages.

The warmth of the name and facial maturity of the applicants were manipulated by a black-and-white picture attached to the resume and the name of the applicant. Only the name and face changed over conditions, while the background information remained consistent over conditions. The background information included the applicant's name, birth date, name of high school attended, GPA, class rank, and reason for application. The GPA and class rank were chosen so that the applicant seemed in general, to be competent. This biographical data appears in Appendix A.

Job-hiring Measures

Each subject was given a description of each of the two part-time job openings at a day care center -- teacher and director assistant. The description of each of the teacher's assistant position called for helping care for children, assisting with naps, meals, and on the playground, whereas the description of the director's assistant job included clerical duties, passing along instructions from the director, and working in administrative functions. Each subject judged the suitability of the applicant for both jobs, referring to the job descriptions

as often as needed. After perusing the applicant information, subjects indicated how strongly they would recommend the applicant for each job on 7-point bi-polar scales (endpoints labelled "not at all likely" and "very likely").

Trait Measures

Subjects then rated each applicant on a series of 7-point bi-polar scales including: dishonest/honest, cold/warm, strong leadership capabilities/no leadership capabilities, physically weak/physically strong, shrewd/naive, maturefaced/babyfaced, and unattractive/attractive. The latter two measures, assessed on a separate page, were designed to determine effectiveness of the facial maturity and attractiveness manipulations. The physically weak/physically strong measure was reverse-scored for use in subsequent analyses, so that higher numbers on all measures represented childlike qualities.

After completing all the experimental tasks, subjects were told that this experiment involved studying impression formation and job hiring. The subjects also were told not to disclose any information about the experiment to other subjects.

Results

Manipulation Checks

Ratings of babyfacedness and attractiveness were entered as dependent measures in a 2 (Subject Gender) x 2 (Applicant's Facial Maturity) x 2 (Warmth of Applicant's Name) completely between-subjects ANOVA. Exemplar of name and face type were

collapsed in these analyses. The analysis for babyfacedness produced only one significant effect. The applicants designated as babyfaced ($\underline{M}$ = 5.36) were seen as more babyfaced than the applicants deemed maturefaced ($\underline{M}$ = 3.00), $\underline{F}$ (1, 77) = 49.05, $\underline{p}$ < .001. On the attractiveness measure, no main or interactive effects reached significance, all $\underline{F}$s (1, 77) < 1.16, n. s. Thus, the manipulations of face type and attractiveness were successful, as all applicants were judged to be equal in attractiveness, and of varying babyfacedness as manipulated.

Overview

Hiring recommendation ratings and trait ratings were individually entered into 2 (Subject Gender) x 2 (Applicant's Facial Maturity) x 2 (Warmth of Applicant's Name) ANOVAs. Because the interaction of face type and name warmth is of primary concern in this paper, means for these interactions on each dependent measure for mature- and babyfaced applicants with warm and cold names are listed in Table 1. All post-hoc comparisons of means from interactions discussed are the result of Scheffe tests.

Hiring Recommendations

A significant main effect for name revealed that the warm-named applicants were rated higher for the teacher's assistant position ($\underline{M}$ = 5.67) than were the cold-named applicants ($\underline{M}$ = 4.97), $\underline{F}$ (1, 77) = 4.66, $\underline{p}$ < .05. As can be seen in Table 1, a significant face x name interaction emerged, $\underline{F}$ (1, 77) = 4.55. $\underline{p}$

< .05, and the means from this interaction are depicted in Figure 1. Maturefaced applicants with cold names ($\underline{M}$ = 4.45) were not recommended as highly for the teacher's assistant position as were maturefaced applicants with warm names ($\underline{M}$ = 5.79), $\underline{p}$ < .05. However, name warmth did not impact the favorability of recommendations for the babyfaced applicants ($\underline{M}$ warm = 5.55, $\underline{M}$ cold = 5.53). This interaction was qualified by a sex x name x face interaction, $\underline{F}$ (1, 77) = 3.88, $\underline{p}$ < .05. Only male subjects made differential ratings of the hirability of maturefaced applicants for the teacher's assistant job. Males judged maturefaced applicants with cold names ($\underline{M}$ = 3.78) as considerably less suitable than maturefaced applicants with warm names ($\underline{M}$ = 6.00). Females showed no similar bias. The triple-order interaction is depicted in Figure 2. No other main or interactive effects were significant.

On the director's assistant measure, a significant main effect for face revealed that maturefaced applicants ($\underline{M}$ = 4.87) were rated more favorably for the position than babyfaced applicants ($\underline{M}$ = 3.82), $\underline{F}$ (1, 77) = 6.58, $\underline{p}$ = .01. A marginally significant main effect for name revealed that the applicants with cold names ($\underline{M}$ = 4.69) were rated more favorably for the director's assistant job than the applicants with warm names ($\underline{M}$ = 4.00), $\underline{F}$ (1, 77) = 6.58, $\underline{p}$ = .10. This ANOVA produced a significant face x sex interaction, $\underline{F}$ (1, 77) = 4.05, $\underline{p}$ < .05. Males judged maturefaced applicants ($\underline{M}$ = 5.34) as more suitable

than babyfaced applicants ($\underline{M}$ = 3.45) for the director's assistant job, $\underline{p}$ < .05, but females again showed no bias, as maturefaced applicants ($\underline{M}$ = 4.43) and babyfaced applicants ($\underline{M}$ = 4.42) were judged as equally hirable. This interaction appears in Figure 3. No other main or interactive effects obtained significance.

Traits

Ratings of honesty, warmth, lack of leadership capability, naivete, and physical weakness were separately entered as dependent measures in a 2 (Subject Gender) x 2 (Applicant Facial Maturity) x 2 (Warmth of Applicants Name) between-subjects ANOVAs.

Babyfaced applicants ($\underline{M}$ = 5.92) were rated as more honest than maturefaced applicants ($\underline{M}$ = 4.82), $\underline{F}$ (1, 77) = 22.54, $\underline{p}$ < .001. As well, applicants with warm names ($\underline{M}$ = 5.62) were rated as more honest than applicants with cold names ($\underline{M}$ = 5.13), $\underline{F}$ (1, 77) = 4.11, $\underline{p}$ < .05. No other main effects or significant interactions were obtained from this analysis.

For the warmth measure, a main effect for face revealed that babyfaced applicants ($\underline{M}$ = 5.77) were rated more warm than maturefaced applicants ($\underline{M}$ = 4.46), $\underline{F}$ (1, 77) = 14.36, $\underline{p}$ < .001, and a main effect for name revealed that the applicants with warm names ($\underline{M}$ = 5.59) were rated warmer than the applicants with cold names ($\underline{M}$ = 4.64), $\underline{F}$ (1,77) = 7.06, $\underline{p}$ < .01. Also, a marginally significant face x name interaction emerged, $\underline{F}$ (1, 77) = 2.75, $\underline{p}$ = .10. Maturefaced applicants with cold names ($\underline{M}$ =

3.75) were rated as less warm than maturefaced applicants with warm names (M = 5.21). However, babyfaced applicants with warm names (M = 5.95) were not judged as significantly less warm than babyfaced applicants with cold names (M = 5.21). No other effects were significant.

Concerning judgments of lack of leadership capabilities, the ANOVA revealed a main effect for face, F (1, 77) = 9.43, p < .01, as the babyfaced applicants (M = 3.56) were rated less capable than maturefaced applicants (M = 2.67). Similarly, a main effect for name showed that applicants with warm names (M = 3.44) were rated as less capable than applicants with cold names (M = 2.79), F (1, 77) = 4.59, p < .05. A significant face x name interaction was revealed, F (1, 77) = 6.51, p < .01. Scheffe tests indicated that maturefaced applicants with cold names (M = 2.00) were seen as more capable than maturefaced applicants with warm names (M = 3.37), although babyfaced applicants with cold names (M = 3.63) were not seen as differentially capable when compared with their warm-named counterparts (M = 3.50). No other main or interactive effects were significant.

The ANOVA utilizing perceptions of physical weakness as the dependent measure yielded a significant main effect for name, F (1, 77) = 9.23, p < .01, as applicants with warm names (M = 4.05) were rated as weaker than applicants with cold names (M = 3.28). Scheffe tests indicated that maturefaced applicants with cold names (M = 2.85) were judged as considerably more physically

strong than maturefaced applicants with warm names ($\underline{M}$ = 4.16).
However, babyfaced applicants were judged as equally physically
weak regardless of the type of name ($\underline{M}$ cold = 3.74 and $\underline{M}$ warm =
3.95). No other effects obtained significance.

No main or interactive effects for perceptions of naivete
were significant.

Discussion

The results of this study indicated that name warmth and
face type interact to produce differing perceptions of job
applicants' traits and hirability. People with warm names were
rated as more desirable for a teacher's assistant position than
were people with cold names. Males judged maturefaced job-
seekers with warm names as more suitable than maturefaced
applicants with cold names for the job requiring warmth, although
females did not show this bias. Babyfaced applicants' name
warmth did not impact their hirability for the job requiring
warmth, perhaps because their facial appearance was a more
important cue than was their name. Unlike the findings in the
Zebrowitz et al. (1991) study, babyfaced people were not chosen
as more hirable for the teacher's assistant position, perhaps
because maturefaced candidates with warm names were also judged
to be suitable for the position. Higher recommendations for the
director's assistant position were given to job candidates with
cold names, and, as would be expected, those who were
maturefaced. However, only male subjects believed that

maturefaced candidates were better for this position.

Concerning trait perceptions, and consistent with previous research (e. g., Berry & Brownlow, 1989; McArthur & Apatow, 1983-1984), babyfaced people were seen as more honest, warm, and less capable than their maturefaced counterparts, although they were not judged as more naive or physically weak. As predicted, applicants with warm names were seen as weaker, less capable, and nore warm and honest than those applicants with cold names. Face type and name warmth interacted to modify perceptions of job-seeker's traits, although only for maturefaced candidates. Maturefaced job candidates with warm names were perceived as warmer, physically weaker, and having fewer leadership capabilities than maturefaced applicants with cold names. Thus, the warm name modified the perceptions of strength, coldness, and capability that are typical when perceiving maturefaced people.

Past research (e. g., Smithwick & Steele, 1989) has shown that name effects on impressions are ameliorated when additional appearance information about a person is made salient via a photograph. For example, Hensley and Spencer (1985) demonstrated that undesirable first names have only minimal influence on perceptions of attractiveness. Unlike the findings of Smithwick et al. (1989) and Hensley et al. (1985), name impacted impressions in the present study, even when the names were combined with other information, i. e., a photo. Possibly, name effects disappear only when visual information about a person is

extremely non-normative. That is, it may be the case that when
an exceptionally attractive (or, unattractive) person is depicted
in a photograph, then the name exerts little effect. In this
study, the target stimuli were of average attractiveness, and
were approximately equal in attractiveness. Moreover, name
effects may be fragile when compared to attractiveness effects,
but not babyishness, because babyface effects exist independently
of attractiveness effects (Berry, 1991; Berry & McArthur, 1985).
Finally, the results of this study are consistent with others
(Brownlow, 1992a; 1992b) that have illustrated that the effects
of facial appearance can be modified in a predictable manner when
other information--biographical or appearance--about a person is
present.

The generalizability of the findings of this study are
limited somewhat due to methodological constraints. First, the
nested factors in the design were not analyzed. Second, only
female target stimuli were utilized, and only two types of very
specific jobs were used to assess the impact of name warmth and
face type on job-hiring decisions. At present, a study designed
to examine face type and name warmth on the hirability of male
job candidates is in progress. Unfortunately, practical
implications are also lacking as name popularity shifts over
time, and what is a warm, fairly common name today may not be
viewed the same way in ten years.

In conclusion, the results of this study indicated that a

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person's name and face impacts perceivers' impressions and
potential behavior in a systematic, predictable manner. Warm
names affect the hirability and trait perceptions of job
candidates, particularly those who are maturefaced. These
findings bring us one step closer to understanding how it is that
perceivers combine information about others when forming
impressions.

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Footnotes

1. Exemplar of name and face type were collapsed due to a lack
of a computer program capable of analyzing the nested design.

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Table 1. Mean Job Hiring Recommendations and Trait Perceptions of Baby- and Maturefaced Applicants Having Warm and Cold Names

	Babyfaced		Maturefaced	
Dependent Measure	Cold Name	Warm Name	Cold Name	Warm Name
Teacher's Assistant	5.53	5.55	4.45_a	5.79_b
Director's Assistant[1]	4.11	3.55	5.25	4.47
Honest	5.79	6.05	4.50	5.16
Warm	5.58	5.95	3.75_a	5.21_b
No Leadership Capabilities	3.63	3.50	2.00_a	3.37_b
Physically Weak	3.74	3.95	2.85_a	4.16_b
Naive	4.25	4.32	4.05	3.75

Note. Within each face type, name types with different subscripts differ significantly at the .05 level, according to Scheffé tests
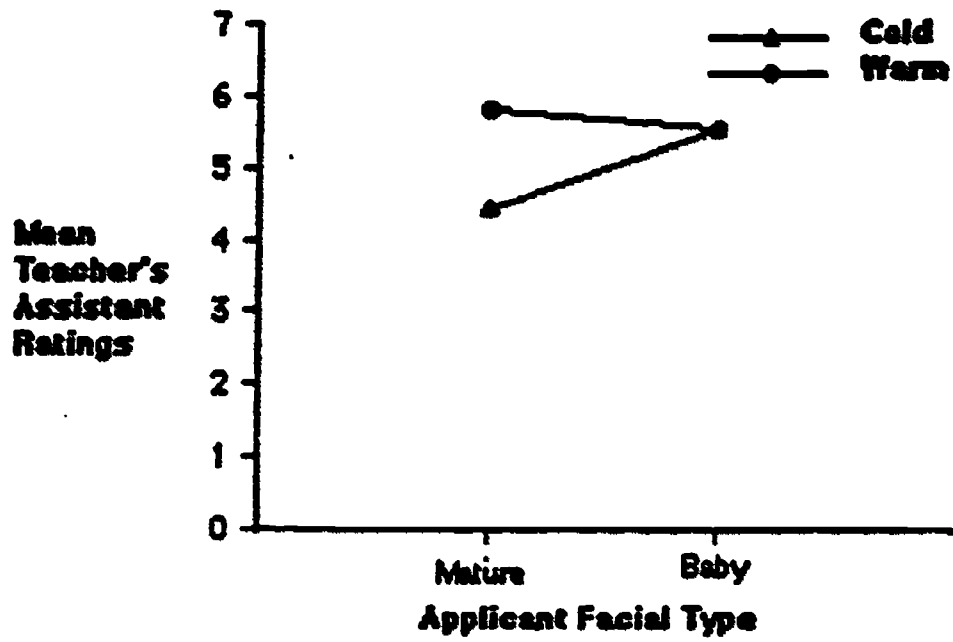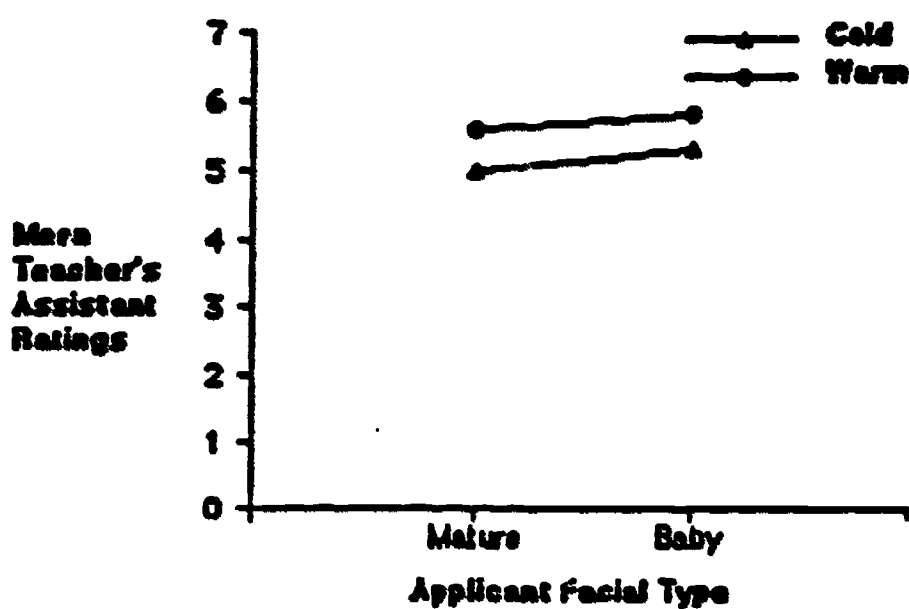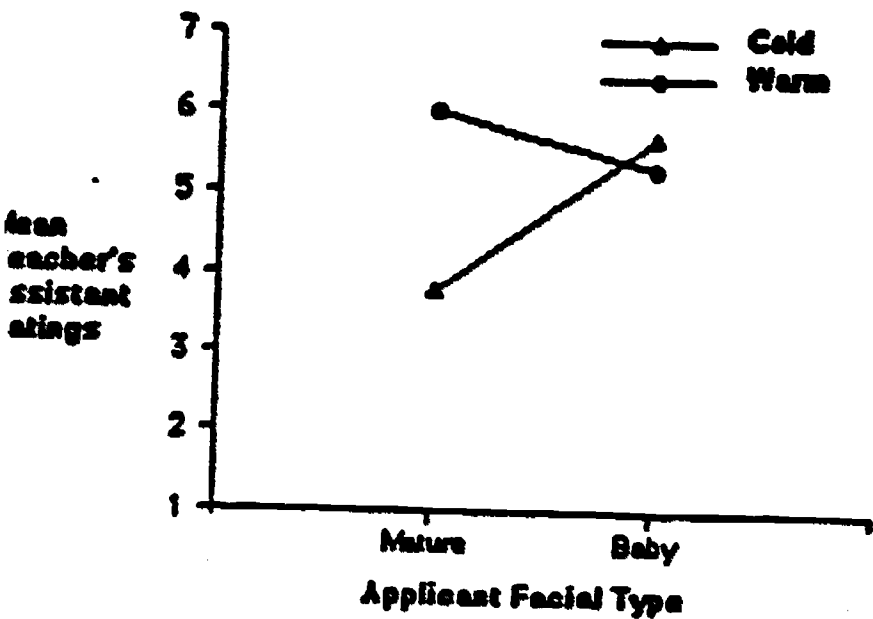1. An interaction with subject sex also emerged for this analysis

Figure 1. Teacher's assistant recommendations as a function of applicant face type and name warmth.

Figure 2. Teacher's assistant recommendations as a function of subject sex, applicant face type, and name warmth.

MALE SUBJECTS   FEMALE SUBJECTS
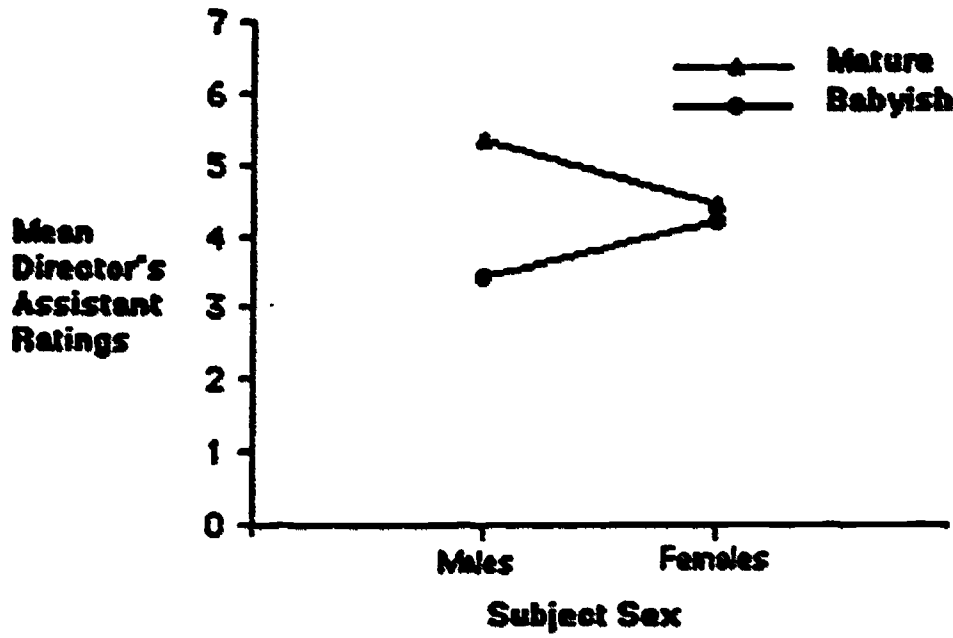
Figure 3. Director's assistant recommendations as a function of subject sex and applicant face type.

Appendix A: Example of Biographical Data Given to

Subjects

APPLICANT BIOGRAPHICAL DATA

NAME: Amanda Harris

Date of Birth: 01-23-73

High School Attended: Austin Preparatory

High School

Class Rank: 94 of 130

GPA: 3.25

Reason for Application: To gain experience in day-care field.