

SEXISM AND SEX ROLES IN LETTERS OF RECOMMENDATION TO GRADUATE TRAINING IN PSYCHOLOGY

JULE HENDERSON, JOHN BRIERE, and ROSS HARTSOUGH
The University of Manitoba

ABSTRACT

Two hundred forty seven letters of recommendation to a graduate program in psychology were examined for evidence of sexism or sex role related assumptions. No multivariate data were found to support the notion of sex bias in letter content. There were, however, multivariate content differences according to the sex of the letter writer. Women referred more to emotional or personality traits and discussed goal orientation more often than did male writers, resulting in longer female-written letters. The possibility of an "advocacy effect" is suggested, in that females tended to write longer letters and cite goal orientation more often for female applicants.

Sex bias against women has been demonstrated in a number of occupations and professions (Levitin, Quinn, & Staines, 1971; Rosen & Jerdee, 1974; Perrucci, 1970). The literature regarding sex discrimination in admission to graduate school, however, has been more equivocal (Astin, 1969; Theodore, 1971; Holstrom & Holstrom, 1974; Bickel, Hammel, & O'Connell, 1975). As an important, measurable aspect of this admission process, the content of letters of recommendation to graduate school has come under increasing scrutiny. The American Psychological Association Task Force on the Status of Women (1973), for example, suggested that "departments carefully examine letters of recommendation for possible sexist or discriminatory remarks about women", since a majority of the programs they surveyed relied heavily on letter input in their admission decisions.

Two major investigations of sex bias in letters of recommendation have reported discrimination against women. Lunneborg and Lillie (1973) content analyzed letters of recommendation to graduate training between 1963 and 1967, and found an increased number of references to physical attractiveness, acceptance of the female role, and seductiveness in letters for female applicants, relative to their male counterparts, Munter (Note 1) also reported sex biased letter content, including greater reference to physical attractiveness, and exclusive use of adjectives such as "charming", "delightful", and "agreeable" in letters supporting female applicants.

In a related study, however, Farley (1978) found no substantial sex of applicant differences in the content of 1,194 letters of recommendation to research and teaching positions written between 1949 and 1977. Instead, her data revealed a general decrease in reference to marital status and physical attractiveness for both sexes across time, terminating in very low reference rates for these categories in the last two years of her sample.

Farley's (1978) evidence of time-related content differences suggests that the Lunneborg and Lillie (1973) and Munter (Note 1) studies may be of limited use in predicting current letter content. Additionally, Farley's data directly contradict the findings of both earlier studies. In light of this ambiguity, the present study was designed to examine reasonably current letter of recommendation content for evidence of enduring sexist or sex role related assumptions.

As suggested by Parsons and Bales' (1955) typology of male and female sex roles, as well as much of the current sex role literature (e.g., Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970, 1972; Deaux, 1976; Weitz, 1977), it was hypothesized that male applicants would be described in terms of instrumentality, or active ability to successfully manipulate the environment, while female applicants would be evaluated on expressive, interpersonal, or ornamental criteria. In the context of an academic environment, male sex-roles were expected to translate into references to cognitive ability or

cognitive style for males, along with evaluation of academic goal orientation. Female sex-roles, conversely, would manifest non-cognitively in references to emotional and interpersonal attributes, physical attractiveness, and sexual availability (marital status).

It was also hypothesized that letter writer sex would affect letter content in sex role appropriate directions. If sex roles reflect prescriptive beliefs about the social appropriateness of male and female behaviour, it is not unreasonable to suppose that letter writers would also be subject to these behavioural constraints. Thus, male writers were expected to be more concerned with the applicant's cognitive traits and goal orientation as a basis for evaluation, while female writers might concentrate on the applicant's emotional, personality, and interpersonal qualities. A final hypothesis, as suggested by the sex role literature (e.g., Schultz, Briere, & Sandler, Note 2), was that letters written by females would contain more words than would those written by males.

Method

A total of 247 letters, one per applicant, were randomly sampled from 683 letters of recommendation received by the University of Manitoba in support of graduate psychology applications for the 1975-1976 year. To eliminate information on sex of applicant and sex of writer, all evaluative phrases (which in some cases consisted of a single word) from each letter were transcribed onto "description lists", one per letter, with all names and references to gender omitted.

Six graduate student judges (three males and three females) evaluated all description lists for the presence of seven previously specified content categories. These categories were: 1) reference to *age* (e.g., "young", "middle-aged", "24-yr.-old", etc.); 2) reference to *marital status* or mention of having or not having children (e.g., "single", "married", "has a young daughter", etc.); 3) reference to *cognitive ability* or cognitive style (e.g., "intelligent", "abstract thinker", "bright", etc.); 4) reference to *physical appearance* or sexuality (e.g., "attractive", "sexy", "petite", etc.); 5) reference to *personality attributes*, emotional characteristics, or general personality style (e.g., "self-confident", "anxious", "emotionally stable", etc.); 6) reference to *interpersonal qualities*, with direct mention or implication of this being an interactive style (e.g., "considerate", "argumentative", "empathetic",

etc.); 7) reference to *goal orientation* or task-oriented achievement (e.g., "well-motivated in class", "excellent teaching assistant", "achievement oriented", etc.).

Interobserver reliability was assessed on all six rater responses to a common subsample of 173 descriptive statements. These statements were taken from every 30th letter in the original sample, as well as from additional letters from the same population but not used in this study. Reliability across all judges and categories was found to be acceptable: Holsti's (1969) reliability coefficient = .87, Scott's (1955) $pi = .83$. After all content ratings were completed, sex of applicant, sex of writer, and number of words were determined by the authors from the original letters.

In addition to content category frequencies, quantitative ratings of overall student suitability were taken from standardized rating forms supplied by the psychology department. These forms specify a rating from 0 to 10 for each student, reflecting evaluations ranging from "marginal student" to "most outstanding candidate in years". Approximately 70% of all writers ($N = 172$) included this standard evaluation form with their letters of recommendation.

Analyses. Statistical analyses for letter content consisted of multivariate analysis of variance, followed by discriminant function analysis and univariate analysis of variance. Due to unequal cell sizes in the factorial design, analyses were corrected for nonorthogonality (Kerlinger & Pedhazur, 1973). This procedure involved reordering each univariate and multivariate effect last for any given analysis, thus providing unbiased although somewhat conservative tests of the null hypotheses (Finn, 1976; Overall & Spiegel, 1969).

The writers' quantitative ratings of applicant suitability were analyzed by dummy-coded multiple regression analysis (Kerlinger & Pedhazur, 1973), similarly corrected for non-orthogonality through effect reordering.

Results

Of 247 applicants, 172 were male and 75 were female. Males wrote 216 letters, while females wrote 31. This male over-representation was highly significant for both applicant sex ($Z = 6.172, p < .0001$) and letter writer sex ($Z = 11.771, p < .0001$).

Multivariate analysis of variance on letter con-

TABLE 1

Means and Standard Deviations per Condition for each content category plus Number of Words per Letter

Content Category	Male writer				Female writer			
	Male applicant (<i>n</i> = 150)		Female applicant (<i>n</i> = 66)		Male applicant (<i>n</i> = 22)		Female applicant (<i>n</i> = 9)	
	M	SD	M	SD	M	SD	M	SD
Age	0.053	0.226	0.091	0.294	0.030	0.173	0.000	0.000
Marital Status	0.053	0.323	0.000	0.000	0.000	0.000	0.000	0.000
Cognitive Ability	0.767	1.108	0.455	0.671	1.152	1.808	1.333	2.236
Physical Appearance	0.027	0.162	0.000	0.000	0.000	0.000	0.000	0.000
Emotion/Personality	3.800	2.525	5.000	3.754	3.894	3.888	7.111	3.257
Interpersonal	0.620	1.121	0.682	0.946	0.742	1.207	1.556	1.424
Goal Orientation	3.507	2.371	4.227	4.151	2.909	2.410	7.111	5.622
Number of Words	168.937	146.836	195.773	145.286	146.197	128.174	300.333	230.843

tent revealed a significant sex of writer effect, $F_m(8,236) = 2.460, p = .014$. No significant multivariate effect was found for sex of applicant ($F_m[8,236] = 1.347, p = .221$), nor for an applicant x writer interaction ($F_m[8,236] = 1.396, p = .199$). See Table 1 for means and standard deviations for each multivariate condition.

Inspection of univariate ANOVAs subsequent to the significant multivariate sex of writer effect (per Spector, 1977) indicated that females wrote more words per letter ($F[1,243] = 5.245, p = .023$), referred more to the applicant's emotional or personality attributes ($F[1,243] = 6.564, p = .011$), and discussed the applicant's goal orientation more often than did male writers ($F[1,243] = 9.456, p = .002$). Discriminant function analysis reinforced the ANOVA finding of sex differences on emotional-personality attributes ($C = -.623$) and goal orientation ($C = -.637$), but indicated that number of words per letter no longer discriminated between male and female writers when the other variables were taken into account ($C = .017$).¹

Although it is not common practice to examine individual univariate results in a nonsignificant multivariate effect, two significant ANOVAs in the (nonsignificant) multivariate interaction of sex of writer x sex of applicant were of sufficient interest to be reported here. Significant ANOVAs were found for number of words per letter ($F[1,243] = 4.286, p = .039$) and for goal orientation ($F[1,243] = 7.848, p = .005$). Subsequent analysis of simple effects revealed that female letter writers both wrote longer letters ($F[1,243] = 5.779, p = .017$) and referred more often to goal orientation ($F[1,243] = 10.770, p = .001$) when they wrote for female applicants.

Analysis of the quantitative departmental forms revealed no relationship between numerical ratings of overall suitability and applicant sex ($F[1,168] = 1.139, p = .287$), writer sex ($F[1,168] = .629, p = .429$), or applicant sex x

writer sex interaction ($F[1,168] = 1.292, p = .252$). Total variation accounted for was similarly nonsignificant ($R^2 = .012; F[3,168] = .665, p = .575$).

Discussion

The present study indicates that sex roles, if not sex bias, can significantly affect the content of letters of recommendation to a graduate psychology program. Although the frequency of reference to seven content categories did not vary significantly across sex of applicant, differences were found across sex of writer. Females referred more to emotional or personality traits and described applicant goal orientation more often than did males. These increased references resulted in significantly longer letters by female writers.

While increased letter length and emotional-personality references were predicted for female writers, the greater reference to goal orientation by these writers was unexpected. It is likely, however, that women who succeed in male dominated fields such as academia are of necessity highly motivated and goal oriented, and might be expected to value and evaluate these traits in others. Further, these qualities would seem most salient for women writers who evaluate other women. Such an "advocacy effect" may have occurred in the present study, given the greater letter length and increased emphasis on goal orientation in letters by women for women. Interpretation of this advocacy effect must be tempered, however, by the absence of supporting multivariate significance.

The failure of the applicant differences hypothesis may be indicative of current trends in academia. As sex discrimination issues are more widely recognized, referees may become increasingly unwilling to go "on the record" with sexist statements or assumptions. Yet, the data in this study do not support a statement that sex discrimination has been banished from the current academic setting. Male applicants outnumbered female applicants by more than two to one, and male letter writers exceeded female writers by more than a six to one ratio.

It is important to note that the absence of frequency differences in letter content does not logically presuppose *qualitative* equivalence within each content category. For example, male and female applicants may receive an equal num-

¹ As noted by Tatsuoka (1970, p. 4), discriminant function analysis can be considered equivalent to multiple regression in that "each weight represents the relative importance of that variable with the effects of the other variable 'partialled out'." Thus, "emotional-personality" and "goal orientation" remained significant when controlling for all other variables (including "words per letter"), while "words per letter" ceased to be an important discriminator when all other variables (including "emotional-personality" and "goal orientation") were held constant.

ber of references to content category X, yet males may be evaluated positively and females negatively on that dimension. For this reason, an overall measure of positivity-negativity was included in the analysis. No differences were found in numerical ratings of applicant suitability for either sex or writer or sex of applicant. This absence of applicant sex differences in numerical ratings is congruent with the finding of no applicant differences in content frequency. The disagreement between quantitative ratings and content frequencies for sex of writer, however, suggests that referees may consider descriptive letter content to be functionally separate from final, "hard" evaluations of overall competence or suitability.

In summary, while our data revealed no evidence of differential evaluative criteria according to applicant sex, there were important content differences according to writer sex. Additionally, males outnumbered females in both applicant and letter writer groups. Assuming that women are not inherently less able to pursue graduate training than are men, we must reasonably conclude that social constraints act to discourage graduate psychology education for females. The present study does suggest that once past these social hurdles, female applicants will be evaluated on the same criteria as their male counterparts in letters of recommendation to graduate psychology training.

RESUME

Deux cent quarante-sept lettres de recommandation pour un programme gradué en psychologie ont été examinées pour évidence de sexisme ou de préférences en relation avec les rôles du sexe. Il n'y eut pas de données multivariés soutenant la notion de biais sexuel dans les lettres. Il y eut, néanmoins des différences multivariés selon le sexe de l'auteur de la lettre. Les femmes se ont référées plus aux traits émotionnels ou de personnalité et ont discuté de l'orientation de leurs buts plus que les écrivains mâles. Le résultat a été que les lettres par les écrivains féminins ont été plus longues. La possibilité d'un "sens plaidoyer" est proposé en ce que les femmes auraient tendance à écrire des lettres plus longues et à citer l'orientation vers leurs buts plus souvent pour les candidates du sexe féminin.

Reference Notes

1. Munter, P. *Anatomy is destiny: Informal sex discrimination in graduate school*. Paper presented at the meeting of the Western Psychological Association, San Francisco, California, 1974.
2. Schultz, K., Briere, J., & Sandler, L. *Sex and age differences in verbal content*. Paper presented at the annual meeting of the Canadian Psychological Association, Quebec City, June, 1979.

References

- American Psychological Association. Report of the task force on the status of women in psychology. *American Psychologist*, 1973, 28, 611-616.
- Astin, H. S. *The woman doctorate in America: Origins, career, and family*. New York: Russell Sage Foundation, 1969.
- Bickel, P. J., Hammel, E. A., & O'Connell, J. W. Sex bias in graduate admissions: Data from Berkeley. *Science*, 1975, 187(4175), 398-404.
- Broverman, I. K., Broverman, D. M., Clarkson, F. E., Rosenkrantz, P. S., & Vogel, S. R. Sex-Role stereotypes and clinical judgements of mental health. *Journal of Consulting and Clinical Psychology*, 1970, 34, 1-7.
- Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. Sex-Role stereotypes: A current appraisal. *Journal of Social Issues*, 1972, 28(2), 59-78.

- Deaux, K. *The behavior of men and women*. Monterey, California: Brooks/Cole, 1976.
- Farley, J. Academic recommendations: Males and females as judges and judged. *American Association of University Professors Bulletin*, 1978, 82, 82-85.
- Finn, J. D. *Multivariate: Univariate and multivariate analysis of variance, covariance, and regression*. Chicago: International Educational Services, 1976.
- Holsti, O. R. *Content analysis for the social sciences and humanities*. Don Mills, Ontario: Addison-Wesley, 1969.
- Holstrom, E. I., & Holstrom, R. W. The plight of the woman doctoral student. *American Educational Research Journal*, 1974, 11, 1-17.
- Kerlinger, F. N., & Pedhazur, E. J. *Multiple regression in behavioral research*. New York: Holt, Rinehart and Winston, 1973.
- Levitin, T., Quinn, R. P., & Staines, G. L. Sex discrimination against the American working woman. *American Behavioral Scientist*, 1971, 15, 237-254.
- Lunneborg, P. W., & Lillie, C. Sexism in graduate admissions: The letter of recommendation. *American Psychologist*, 1973, 28, 187-189.
- Overall, J. E., & Spiegel, D. K. Concerning least squares analysis of experimental data. *Psychological Bulletin*, 1969, 72, 311-322.
- Parsons, T. & Bales, R. *Family socialization and interaction process*. Glencoe, Ill.: Free Press, 1955.

- Perrucci, C. C. Minority status and the pursuit of professional careers: Women in science and engineering. *Social Forces*, 1970, 49, 245-259.
- Rosen, B., & Jerdee, T. H. The effects of applicant's sex and difficulty of job on evaluations of candidates for managerial positions. *Journal of Applied Psychology*, 1974, 59, 511-512.
- Scott, W. A. Reliability of content analysis: The case of nominal scale coding. *Public Opinion Quarterly*, 1955, 19, 321-325.
- Spector, P. E. What to do with significant multivariate effects on multivariate analyses of variance. *Journal of Applied Psychology*, 1977, 62, 158-163.
- Tatsuoka, M. *Discriminant analysis: The study of group differences*. Champaign, Ill.: Institute for Ability and Personality Testing, 1970.
- Theodore, A. (Ed.). *The professional woman*. Cambridge, Mass: Schenkman, 1971.
- Weitz, S. *Sex roles: Biological, psychological and social foundations*. New York: Oxford University Press, 1977.

CPA ANNOUNCEMENT

The Canadian Psychological Association now has available, in English and French, copies of "Standards for Providers of Psychological Service." These standards were adapted from an American Psychological Association document (see *American Psychologist*, 1977, 32, 495-505), but were revised to take into account the different Canadian laws which regulate the practice of psychology in Canada. The four major standards articulated focus on: Providers, Programs, Accountability and the Environment. To obtain a copy (price = \$2.50) of the CPA Standards, write:

Dr. Tim Hogan
Executive Officer
Canadian Psychological Association
558 King Edward Avenue
Ottawa, Ontario
K1N 7N6

ANNONCE DE LA SOCIÉTÉ CANADIENNE DE PSYCHOLOGIE

La Société Canadienne de Psychologie dispose maintenant en anglais et en français de copies de "Standards pour les pourvoyeurs de services psychologiques." Ces standards ont été adaptés d'un document de l'American Psychological Association (voir *American Psychologist*, 1977, 32, 495-505), mais ils ont été révisés afin de faire état des lois canadiennes qui régissent la pratique de la psychologie au Canada. Les quatre standards majeurs articulés concentrent sur: Pourvoyeurs; Programmes; Responsabilité; et l'Environnement. Pour obtenir une copie (le prix = \$2.50) des standards de la Société Canadienne de Psychologie écrivez au:

Dr. Tim Hogan
Officier Exécutif
Société Canadienne de Psychologie
558 Avenue King Edward
Ottawa, Ontario
K1N 7N6