Three hypotheses were derived from our basic premise that, among women, social factors are critical in the choice of a high status, nontraditional career. Women applying to nontraditional careers should have lower affiliative needs than women applying to traditional careers. As compared with women entering a traditional field, women entering a nontraditional field (1) will consider being married and having children less important and (2) will be more likely to perceive nontraditional careers as compatible with the satisfaction of social and marital needs. As compared with women entering traditional fields, women entering nontraditional careers will be more likely to have a boyfriend who is supportive and tolerant of a nontraditional career. Data were collected via mailed questionnaires from 153 traditional (nursing and medical rehabilitation) applicants and 78 nontraditional (medical and dental) applicants. The results supported all three hypotheses. (Author)
Social Influences on Women's Pursuit of a Nontraditional Career

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Running Head: Women's Nontraditional Career Choice
ABSTRACT

Three hypotheses were derived from our basic premise that, among women, social factors are crucial in the choice of a high status, nontraditional career. (1) Women applying to nontraditional careers should have lower affiliative needs than women applying to traditional careers. (2) As compared with women entering a traditional field, women entering a nontraditional field (A) will consider being married and having children less important and (B) will be more likely to perceive nontraditional careers as compatible with the satisfaction of social and marital needs. (3A) As compared with women entering traditional fields, women entering nontraditional fields will be more likely to perceive the attitudes of significant others as favorable toward nontraditional careers. (3B) As compared with women entering a traditional field, women entering nontraditional careers will be more likely to have a boyfriend who was supportive and tolerant of a nontraditional career. Data were collected via mailed questionnaires from 153 traditional (nursing and medical rehabilitation) applicants and 78 nontraditional (medical and dental) applicants. The results supported all three hypotheses.
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Social Influences on Women's Pursuit of a Nontraditional Career

The basic premise of this paper is that, among women, social factors and personality needs are crucial in the choice of a high status, nontraditional career. This premise is based on two arguments. First, although achievement needs would appear to be a logical determinant of striving for success, this variable has not been especially useful for women. As O'Leary (1974, p. 819) commented in her recent literature review, "investigations of women's need to achieve have produced puzzling and ambiguous results."

Second, several authors (Horner, 1968, 1972; Bardwick, 1971; Hoffman, 1972) have suggested that females are more socio-emotionally oriented than males. For example, Bardwick (1971) and Lipinski (1966) concluded that college women were most concerned about fulfillment of affiliative and interpersonal needs, whereas men were most concerned about fulfillment of achievement needs. Therefore, we expected such needs to have an important influence on women's career choices.

This viewpoint leads to three major hypotheses. First, we expected women's need for affiliation to influence their career choice. Obviously, within any group of women there exists a range of affiliative needs. Let us assume that high affiliative needs are actually incompatible with the demands of professional high status careers. The years of intensive training and life-long devotion required in a professional career often do not allow time for the social interaction necessary for satisfaction of a strong affiliative need. Thus, women who value time spent with friends, yet are career oriented, may find themselves in a dilemma and may opt for a
less demanding career. Therefore, women applying to nontraditional careers should have significantly lower affiliative needs than women applying to traditional careers (Hypothesis 1).

Second, we felt that women's perceptions of how well they could satisfy various social and marital needs would also influence their career choice. From a cognitive consistency viewpoint (Heider, 1958; Newcomb, 1959) women who seek the fulfilment of socio-emotional needs but pursue nontraditional careers detrimental to these needs should experience imbalance. A woman seeking such a career could reduce her imbalance in a number of ways. In particular, she could reduce the importance she assigns to the fulfilment of social needs, or she could change her perception that the career interferes with the satisfaction of these needs. Assuming that nontraditional careers are more apt to interfere with the satisfaction of marital needs, the following predictions (Hypotheses 2A and 2B) were generated. As compared with women entering a traditional field, women entering a nontraditional field (A) will consider being married and having children less important, and (B) will be more likely to perceive nontraditional careers as compatible with the satisfaction of social and marital needs.

This prediction is consistent with Richardson's (1974) data. Among her samples of college seniors, she found that valuing marriage was significantly related with a traditional career orientation. This prediction also appears consistent with Horner's work (1968, 1972). Her motive to avoid success reflects fear of loss of femininity, fear of social rejection (particularly by male peers) and anxiety about becoming unpopular, unmarriageable or lonely. Horner conceived this motive as an impediment to women's achieving in
a high status career.

The postulated importance of social and interpersonal needs leads one to suspect that women may be sensitive to the attitudes held by others towards their career choice. Both theory and research support this assumption. For example, Bailyn (1964) stated that the most important source of support or hostility for professional women are the attitudes held by men. Hawley (1971, 1972) found that females in traditional roles believe men view behavior as sex-linked and noted that women preparing for nontraditional roles perceived men as having more liberal views. Tangri (1972) obtained complementary results. In exploring the role of peers, she collected data from each woman's closest friend. Of the latter, 24 out of 106 were men. Of these men, only four said they would not like the idea of marrying a woman who had her own career. The women who named these four men as one of their best friends averaged markedly low scores on Role Innovation.

The attitudes of significant others towards various careers may be as important (or even more important) than the careers that the respondents' role models (particularly mothers) actually pursue. Perhaps some mothers who are nurses would have been doctors had the opportunity for women to enter medical school in the thirties and fourties been at least at the level it is today! Given that the attitude of society towards working women is gradually changing, it is probable that some mothers who are not working themselves would nevertheless have a different view about their daughters working and pursuing a fairly demanding career.

These data seem analogous to data on students' sexual standards, another area in which values have changed since World War II. Regarding
sex, the evidence (Riess, 1967) suggests the following: even though the parental generation has more conservative attitudes, the children of liberal parents tend to be more liberal by today's standards than the children of conservative parents.

Generalizing from these arguments, it seems likely that the majority of women who are in professional fields would have been raised by mothers or fathers with favorable attitudes towards their daughters' innovative choice. Based on the premise that perceived attitudes of men, and significant others are important determinants of women's career choice, the following hypotheses were generated:

3A. As compared with women entering traditional fields, women entering nontraditional fields will be more likely to perceive the attitudes of significant others as favorable toward nontraditional careers.

3B. As compared with women entering a traditional field, women entering nontraditional careers will be more likely to have had a boyfriend who was supportive and tolerant of a nontraditional career.

**Method**

**Subjects**

Subjects included applicants to medical school, dentistry, nursing and medical rehabilitation. A career in medicine or dentistry was considered to be nontraditional for women; a career in nursing or medical rehabilitation was considered to be traditional. The sample (N=129) of potential nontraditional respondents included all the applicants to medicine and dentistry with the exception of women over the age of twenty-five. The sample of potential traditional respondents (N=200) included all women applying to nursing or medical rehabilitation who had either an undergraduate degree in
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Arts or Science or at least one year of university prior to entering professional training (N=128). It also included a random sample of applicants who were high school seniors (N=62) selected from the total population of approximately 600 such applicants. The subsample of university educated traditionals was selected to insure greater comparability with the nontraditionals in terms of education and age. The subsample of high school seniors was selected to reflect the large number of women who enter traditional health science training directly from secondary school.

Questionnaire

An envelope containing a questionnaire, an answer sheet, a return envelope and a letter briefly outlining the purpose of the study was mailed to all subjects. The questionnaire included need affiliation and need achievement scales from Jackson's (1967) Personality Research Form. Scores on Jackson's PRF scales could range from 1 to 20, with 20 representing a greater need. The questionnaire also included 12 items concerning the perceived attitudes of males and significant others; nine items concerning marital and social needs and three items concerning the presence (or absence) of a tolerant, supportive boyfriend. The attitudes of significant others, including boyfriends, were measured on scales which could range from one to five with one representing a high degree of perceived support. Data were also collected concerning the respondent's age, self-reported grade point average (GPA), marital status, father's education, father's occupation, mother's education, mother's occupation, and mother's reasons for working outside the home.

Results

The final sample contained 78 nontraditional subjects (62 medical applicants and 16 dental applicants) and 153 traditional subjects (73 nursing
applicants plus 80 medical rehabilitation applicants). The overall return rate was excellent for a mailed survey (74.5%). The return rates for the traditional and nontraditional groups were 71.3% and 76.5%, respectively ($X^2 = 1.11$, N.S.).

**Background Characteristics**

Several preliminary analyses of the data were performed to determine the comparability of the samples on background characteristics. The data concerning the respondent's age, marital status, grade point average, father's education, mother's education, father's occupation, mother's occupation, and mother's reason for working outside the home were analyzed by chi-square statistics. There were no differences between the groups with respect to marital status, mother's occupation, or grade point. The majority of women were single (68 nontraditionals and 139 traditionals); the majority of mothers were either unemployed or employed in lower status positions and the majority of women in both groups had grade points in the range of 3.0 - 3.7 on a 4-point scale. One should recall the GPAs for many of the traditional respondents ($N=56$) were based on high school grades while the GPAs for all the nontraditional respondents were based on university grades. Thus these data must be interpreted with caution. In both groups respondents with mothers working outside the home indicated that self-satisfaction was a more important factor than financial renumeration in determining mother's decision to work.

There was a significant difference in the age of the traditional and nontraditional subjects ($X^2 = 36.62$, df = 14, $p < .05$). The traditional subjects tended to be younger than the nontraditionals. There were also differences in father's education ($X^2 = 25$, df = 14, $p < .05$), mother's education ($X^2 = 18.59$, df = 14, $p < .05$), and father's occupation ($X^2 = 13.4$, df = 4, $p < .05$). Parents of nontraditional subjects tended to be better
educated than parents of traditional subjects. Whereas the proportion of fathers with middle status occupations was similar in the two groups, differences were particularly apparent at the extreme ends of the scale. There was a higher proportion of fathers of nontraditional subjects in higher status positions and higher proportion of fathers of traditionalists in lower status positions.

Need Affiliation

In general, the major hypotheses of the study were confirmed. To test Hypothesis 1, the need affiliation scores of the traditional and nontraditional subjects were compared via a one-tailed t-test. As predicted, the nontraditional groups had significantly lower need affiliation scores than did women in the traditional group (\( \bar{X} = 14.14 \) vs. \( \bar{X} = 16.29 \), \( t(220) = 5.14, p < .01 \)).

Social and Marital Needs

To test Hypotheses 2A and 2B concerning social and marital needs, one tailed t-tests were performed. Traditions clearly attributed greater importance to having children than did nontraditions, \( t(229) = 3.85, p < .01 \). They also had a significant tendency to attribute more importance to being married, \( t(229) = 1.7, p < .05 \).

Both groups indicated that careers in traditional fields would be fairly compatible with social and marital needs, \( t(229) = 0.98, \) N.S. However, the two groups differed in the degree to which they rated nontraditional careers as compatible with social and marital needs. As predicted in Hypothesis 2B, nontraditional respondents perceived more possibility for fulfilling social and marital needs while pursuing a nontraditional career.
Perceived Attitudes

To test Hypothesis 3A, concerning the perceived attitudes of significant others, a $2 \times 2 \times 6$ repeated measures analysis of variance which adjusted for unequal Ns was used. The dependent variable was the perceived attitudes of significant others towards the career choices of women. The independent variables included one between group factor (traditional vs. nontraditional subjects) and two within group factors: 1) type of career being rated (nontraditional or traditional), and 2) as attributed by the respondent to six significant others (her mother, her father, most men, most women, her male friends and her female friends). The results of this analysis are shown in Table 1. We will report primarily the data relevant to our hypothesis. In general, compared with traditionals, nontraditional subjects perceived the attitude of significant others toward nontraditional careers as more favorable. (See the C x T interaction in Table 1, $F(1,229)=4.42, p<.01$). Thus, these data generally provide support for Hypothesis 3A.

Tukey's HSD tests for specific cell comparisons were calculated to determine which significant others were contributing to the overall effect (see Table 2). Nontraditional women, as compared with traditional women, perceived their mothers ($t(2748)=5.0; p<.01$), their fathers ($t(2748)$
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...as more supportive of nontraditional careers. Traditionally, as compared with nontraditionals, consistently perceived their parents as having less favorable attitudes toward any type of career. Given the significant interaction Fs (see Table 1), several additional comparisons were performed to determine how the respondents within each group perceived people's attitudes toward traditional and nontraditional careers. Within the traditional group, women perceived only men in general (t (1374) = 14.46; p < .01) and their female friends (t (1374) = 6.96; p < .01) as having different attitudes toward a traditional vs. a nontraditional career. These subjects felt men in general preferred women to enter traditional as opposed to nontraditional careers. However, these subjects felt their female friends would prefer women to enter nontraditional rather than traditional careers.

The nontraditional females perceived all significant others as having a preference for one type of career over the other; they perceived all the people in their immediate lives—that is, their mother (t (1374) = 6.08, p < .01), their father (t (1374) = 5.43, p < .01), and their male friends (t(1374) = 11.20, p < .01) as favoring women entering a nontraditional rather than a traditional career. However, they perceived men (t (1374) = 15.33, p < .01) and women (t (1374) = 5.22, p < .01) in general as favoring women entering a traditional career.

Since attitude of boyfriends was also thought to be a major determinant of career choice (Hypothesis 3B), these data were treated as the dependent variables in separate analyses. Boyfriends of girls in both groups were rated as fairly supportive of their particular girlfriend's career choice. Although the difference was not significant via a two-tailed test (t (29) = 1.19; p < .10), boyfriends of nontraditional subjects (x...
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0.7) tended to be somewhat more supportive in general than boyfriends of
traditionals \( (\bar{X} = 1.1) \). When attitudes of all boyfriends towards either a
nontraditional or traditional career were compared a difference was found
in attitudes towards nontraditional but not towards a traditional career.
That is, all boyfriends were supportive of traditional careers to a similar
degree \( (\bar{X}_t = 1.1, \bar{X}_{nt} = 0.7) \), but boyfriends of women in the nontraditional
group \( (\bar{X} = 1.0) \) were much more supportive of nontraditional careers than
boyfriends of women in the traditional group \( (\bar{X} = 1.6, t (229) = 5.394; \)
\( p < .01 \). 

Need Achievement

In addition to the hypothesized results, need achievement scores of
women in the nontraditional group were significantly higher \((\bar{X} = 15.18 \text{ vs.} \)
\( \bar{X} = 14.09, t (229) = 2.96, p < .01 \). In light of previous findings, this
result had not been predicted.

Regression and Covariance Analyses

To determine the relative importance of variables found to be signifi-
cantly different between the groups in predicting career choice, a step-
wise multiple regression analysis was computed. A preliminary analysis
involving career choice as the criterion variable used 29 of the 34 variables
cited in the methods section in the predictor equation. Five of the original
34 variables were excluded: age plus four variables that were either nominal
in nature or that did not differ significantly between the two groups. The
29 variables accounted for 37% of the variance \((F = 4.11, df = 52, p < .01)\)
but the t-statistic determined that only 7 variable were found to be signifi-
cant contributors. A further analysis indicated that these 7 variables
accounted for 26.6% of the variance ($F = 11.97, df = 52, p < .01$). They included need affiliation (11%), need achievement (4%), mother's attitude towards nontraditional careers (3.4%), desire to have a family (2.1%), perceived attitudes of women in general towards traditional careers (2.1%), father's education (2.4%) and lastly, perceived compatibility of marital needs with nontraditional careers (1.6%). Thus, even when taking all variables in combination, the variables of concern to the present authors were still significant predictors of women's career choices.

To determine if the background differences in age, father's education, father's occupation, mother's education had any effect on the hypothesized results, several analyses of covariance were performed. These analyses were limited to two dependent variables: need affiliation and need achievement. When these background variables were used as covariates, all the previously reported results remained. Thus, these findings do not appear to be an artifact of demographic differences between the two groups.

Finally, a partial check was performed to determine the importance of having both a high school and a university educated subsample of traditional respondents. The major predictions were again tested using only the university educated subsample as traditional respondents. These final analyses supported all the authors' hypotheses.

**Discussion**

The data support the basic premise that, among women, social factors are crucial in the choice of a nontraditional career. Given the support for Hypotheses 1 and 2, the discussion will focus on how three factors (the perceived attitudes of others, father's education, and need achievement) influ-
Women entering nontraditional careers perceived most significant others as more favorably oriented toward such a career choice than did traditional respondents.

Although the attitudes of boyfriends in the two groups were significantly different, they did not appear to have the overwhelming impact that had previously been postulated. As the average respondent in our sample was just beginning her professional education, it is conceivable that many of them were still dating casually. Perhaps many women purposely delay serious heterosexual commitments until they have completed (or nearly completed) their educational training. Therefore, it would perhaps be premature for their boyfriends to play a major part in their career decisions. Tangri (1972) has found results compatible with this view. Only among more seriously committed respondents was career choice markedly influenced by the respondent's partner.

In this study, mother's attitude was a stronger factor in predicting career choice than mother's occupation. It must be noted that the lack of relationship between mother's occupation and daughter's choice could be due to the small number of working mothers in this sample. Other investigations have found evidence for a modelling effect (Tangri, 1972). However, this study appears to indicate that mother's attitude may be as crucial or in some instances more crucial than mother's behavior.

One additional finding regarding the attitudes of significant others merits comment: nontraditionals perceived "women in general" and "men in general" as being less favorable toward nontraditional careers than towards traditional careers. Intuitively, one might expect such perceived attitudes
to discourage these girls from seeking nontraditional careers. Yet, this did not appear to be the case. Perhaps, women discriminate between significant others in their immediate environment and people in general. Many theories of attitude change suggest that we are more apt to internalize the attitudes of people with whom we identify. This suggests that people who are in the women's immediate environment should have more influence on career choice than people "in general".

**Father's Education**

Tangri (1972) did not find a relationship between fathers' status and career choice, yet we did. The differences in results may reflect the populations studied. One possibility is that father's status is more important in the choice of a medical career than in the choice of other nontraditional careers. This possibility is especially likely in this study since the specific school in question is perceived by many prospective students as giving preference to the offspring of doctors. Another possibility is that Tangri's students at the University of Michigan came from relatively affluent and economically homogeneous backgrounds. Our Manitoba sample probably came from more diverse backgrounds. Naturally, if Tangri's sample came from homogeneous backgrounds, this would reduce her probabilities of finding statistically significant results. We would consider our data more relevant for society at large.

**Need Achievement**

The finding that nontraditionals had higher need achievement scores than traditionals had not been predicted. In the regression analyses, need achievement was the second most important predictor of career choice. This contradicts earlier nonsignificant findings. However, it must be noted that
our measure was a paper-and-pencil questionnaire technique, whereas most
previous investigations have used a fantasy-based story telling measure such
as the TAT. In a recent review article, O’Leary (1974) suggests that “low
reliability of traditional (TAT based) measures may help explain the failure
to find relationships between achievement motives and achievement behavior
among women” (p. 820). Therefore, if previous investigations had used more
reliable techniques a relationship between need achievement and behavior
might have been established. We feel research using reliable, well valid-
ated objective need achievement measures may still demonstrate the
importance of this variable in women’s career choices.

In summary, crucial factors encouraging women to pursue a nontradi-
tional health science career include: low need affiliation, high need
achievement, perceiving support in the attitudes of others (particularly
mothers), a low need to have children, and perceiving the need to have a
family as being compatible with a nontraditional career.
References


O'Leary, V.E. Some attitudinal barriers to occupational aspiration in women. Psychological Bulletin, 1974, 81, 809-816.
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Footnotes

The authors wish to thank Dr. Michael Thomas for his contributions to all phases of this project and Dr. Sandra Tangri for her comments on an early version of the manuscript. Reprint requests should be addressed to Daniel Perlman, Department of Psychology, University of Manitoba, Winnipeg, Canada, R3T 2N2.
TABLE 1

An Analysis of Variance of Perceived Attitudes Using the Subjects' Career Choice (C), the Type of Career Being Rated (T) and Significant Others (O) as Independent Variables

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects' Career Choice (C)</td>
<td>1</td>
<td>1.46</td>
<td>0.65</td>
</tr>
<tr>
<td>Error 1</td>
<td>229</td>
<td>2.24</td>
<td></td>
</tr>
<tr>
<td>Type of Career Being Rated (T)</td>
<td>1</td>
<td>0.73</td>
<td>0.40</td>
</tr>
<tr>
<td>C x T</td>
<td>1</td>
<td>8.31</td>
<td>4.42*</td>
</tr>
<tr>
<td>Error 2</td>
<td>229</td>
<td>1.88</td>
<td></td>
</tr>
<tr>
<td>Significant Others (O)</td>
<td>5</td>
<td>18.76</td>
<td>46.93*</td>
</tr>
<tr>
<td>C x O</td>
<td>5</td>
<td>0.46</td>
<td>1.16</td>
</tr>
<tr>
<td>Error 3</td>
<td>1145</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>T x O</td>
<td>5</td>
<td>63.53</td>
<td>94.41*</td>
</tr>
<tr>
<td>C x T x O</td>
<td>5</td>
<td>5.04</td>
<td>7.49*</td>
</tr>
<tr>
<td>Error 4</td>
<td>1145</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2771</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01
TABLE 2

Perceived Attitudes of Significant Others Toward Traditional and Nontraditional Careers

<table>
<thead>
<tr>
<th>Significant Other</th>
<th>Traditional (N=153)</th>
<th>Nontraditionals (N=78)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Attitudes Toward Traditional Careers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>2.08</td>
<td>2.28</td>
</tr>
<tr>
<td>Father</td>
<td>2.21</td>
<td>2.37</td>
</tr>
<tr>
<td>Men</td>
<td>1.97</td>
<td>1.89</td>
</tr>
<tr>
<td>Women</td>
<td>2.36</td>
<td>2.15</td>
</tr>
<tr>
<td>Male Friends</td>
<td>2.35</td>
<td>2.40</td>
</tr>
<tr>
<td>Female Friends</td>
<td>2.48</td>
<td>2.67</td>
</tr>
<tr>
<td>Perceived Attitudes Toward Nontraditional Careers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>2.16</td>
<td>1.72</td>
</tr>
<tr>
<td>Father</td>
<td>2.20</td>
<td>1.87</td>
</tr>
<tr>
<td>Men</td>
<td>3.30</td>
<td>3.30</td>
</tr>
<tr>
<td>Women</td>
<td>2.33</td>
<td>2.63</td>
</tr>
<tr>
<td>Male Friends</td>
<td>2.40</td>
<td>2.09</td>
</tr>
<tr>
<td>Female Friends</td>
<td>1.84</td>
<td>1.64</td>
</tr>
</tbody>
</table>

Note: All responses were on a 1 (= most favorable) to 5 (=most unfavorable) scale.