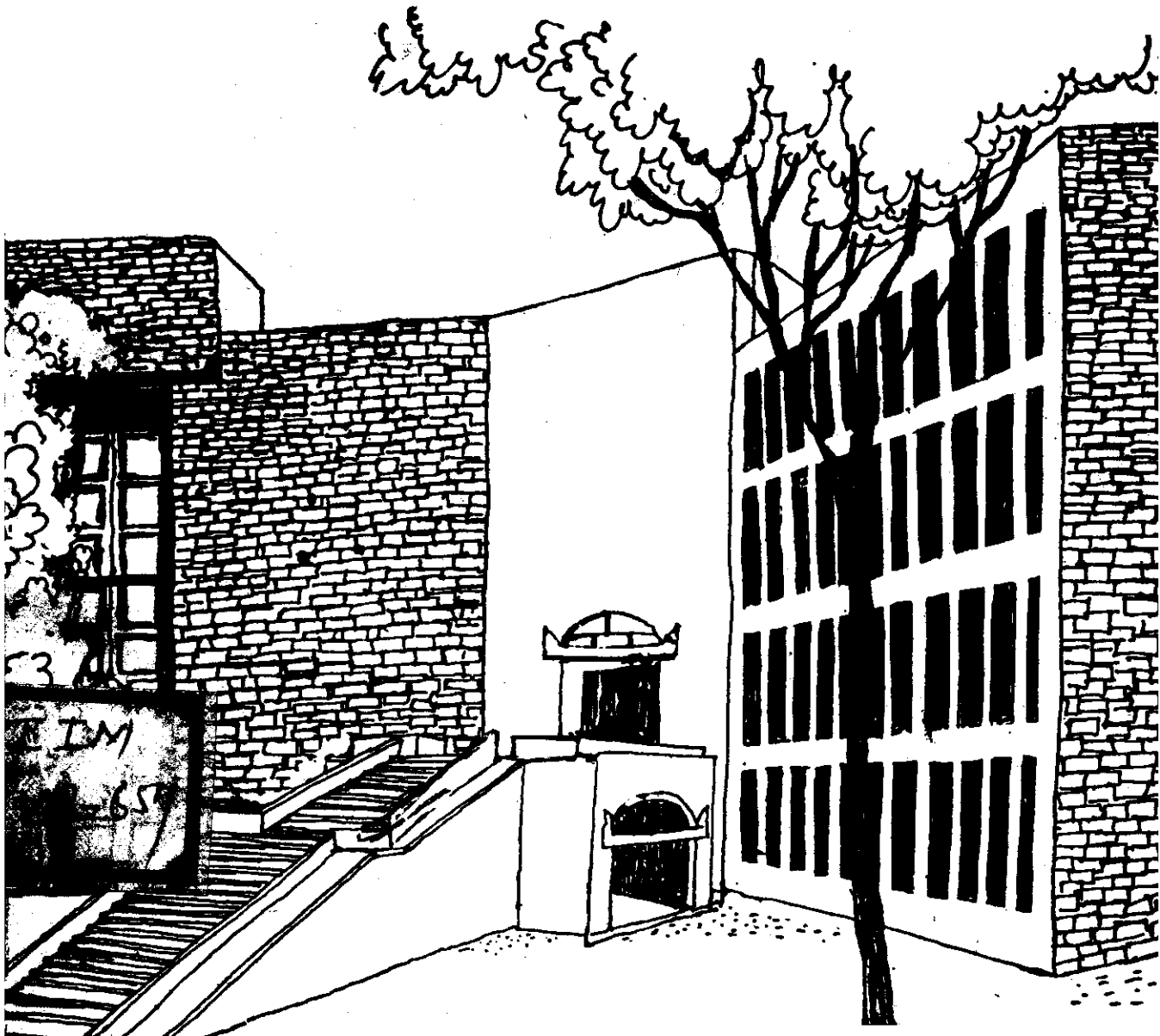




# Working Paper



**MALE AND FEMALE MANAGERS IN UNITED STATES  
AND INDIA: A STUDY OF CHANGE AGENT STYLES  
PERSONALITY FACTORS AND BIOGRAPHICAL  
DIFFERENCES**

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MALE AND FEMALE MANAGERS IN UNITED STATES AND INDIA:  
A STUDY OF CHANGE AGENT STYLES, PERSONALITY FACTORS  
AND BIOGRAPHICAL DIFFERENCES

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## ABSTRACT

### MALE AND FEMALE MANAGERS IN UNITED STATES AND INDIA; A STUDY OF CHANGE AGENT STYLES, PERSONALITY FACTORS AND BIOGRAPHICAL DIFFERENCES

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This paper reports results of a study conducted to investigate the differences in male and female managers in America and India. Two samples were used, one male and one female, in each country. The samples were matched cross-culturally for comparability in age, education, and level of management in the company. The Indian data were collected from participants attending management development programmes at the Indian Institute of Management, Ahmedabad. The American data were collected from attendees at MBA programs (evening and weekend further education for practicing managers) in business schools in New Jersey.

Three questionnaires were used for data collection. Hall and Williams Change Agent Questionnaire was used to collect data on change style. Personality data was collected on Cattell's Sixteen Personality Factor Questionnaire. The biographical questionnaire collected data on educational level, managerial level, age, salary, area of work, type of industry, etc.

Analysis of data showed the female managers to be significantly different from the male managers. These differences were across all the three areas that were investigated, namely, change agent styles, personality factors, and biographical characteristics. The female managers used the credibility style of introducing change more often than the male managers. Female managers emerged as more hardworking, achievement-driven, having higher standards, experiencing greater conflict and being more hurting than their male counterparts. Female managers were younger, more educated and less paid than male managers. A comparison of the American female managers with Indian female managers showed the former to be further behind the salary of male American managers than their Indian counterparts while being comparable in education and job status.

Richard N. Ottaway and Deepti Bhatnagar\*

### Introduction

The number of women entering the work force is steadily increasing. A large portion of them enter traditional female jobs. However, in recent years many are entering management positions, mostly at the middle management levels. Recent reports indicate that American female managers lag behind their male counterparts in salary (Working Woman, 1985). There is also evidence that the salaries of European women are closer to (and gaining more rapidly on) men's salaries than American women (Hewlett, 1986). This study used Indian and American samples of managers to test the hypothesis that American female managers are less different from American male managers in change styles, personality, biographical characteristics than Indian male and female managers.

### Literature Review

Studies on sex differences in personality characteristics have shown mixed results. Based on their review of <sup>research,</sup> Maccoby and Jacklin (1974) concluded that men are indeed more aggressive than women in a wide variety of situations. Steinberg and Shepiro (1982) found that male and female MBA students did not differ on traditional aspects of personality as measured by Cattell's 16 PF, the California Personality Inventory (CPI), the Rathus Assertive Inventory. However, on the CPI female MBA scored higher than males on "masculine traits" and the males scored higher than the females on "feminine traits".

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A number of studies on competitiveness show no sex differences; such as, Komorita and Mechling (1967) and Speer (1972) in laboratory situations. Nisbelt and Gordon (1967) in their study on susceptibility to social influence did not find any significant differences by sex. Eagly and Carli (1981), on the other hand, reported a significant overall sex difference in influenciability, as did Freedman et al (1970). Kahn, Hottes and Davis (1971) found men to be more competitive, and Cook, et al (1970) found men to be less compliant than women. Hollander, Julian and Haaland (1965) found women to be significantly higher in conformity than men. Eagly (1983) contends that the small sex differences reported from small group interaction situations in laboratory studies can indeed emerge as significant if results testing the same hypothesis can be aggregated and meta-analysed. Some researchers (Carlson and Carlson, 1960; Maccoby, 1966) believe that potential sex difference are omnipresent but are often ignored in studies.

Males have been found to have higher levels of self confidence than females when asking for expectations of success Crandell, (1978). Generally, females have been found to differ significantly from men on anxiety level. Block (1976) found them to be more fearful, timid, and anxious than males. However, the majority of these studies have been based on self reports and may simply indicate that women are more willing to admit to anxieties than men (Maccoby and Jacklin, 1974). Dominance is another characteristic which frequently yields sex differences, with males being found more dominant than females (Hyde, 1985). But Henley (1973) found dominance to be related to status.

These studies investigate sex differences in the general population. A more focussed area of inquiry can be the differences in characteristics between men and women in managerial and leadership positions. Some researchers have investigated the role of stereotyping in this situation. Schein (1973) found that male middle managers perceived successful middle managers as having the personality characteristics more similar to men in general than to women in general. A follow-up study (Schein, 1975) produced similar results using female managers who rated successful middle managers as more similar to men than to women. Powell and Butterfield (1979) also found that good managers were described in masculine terms. Massengil and Dimarco (1979) found men and managers <sup>were</sup> perceived as more similar than either men and women or women and managers.

Broverman, et al (1972) suggest that research evidence can substantiate or disprove various stereotypes about the sex-related distribution of attributes and characteristics. But the results of such studies are often conflicting. Roussell (1974) in a study of high school departmental heads found no significant sex differences in aggressiveness, suggestibility, professional knowledge and sense of power. In their study of professionals in scientific disciplines, Graddick and Farr (1983) did not find any significant differences between men and women in job involvement and professional activities although there were differences in their level of organizational commitment. Donnell and Hall (1980) in their examination of five dimensions of managerial achievement, found no significant differences between American male and female managers. Hyde (1985) confirms that various studies have found few if any gender differences.



In a study of male and female administrators, Strache (1976) compared respondents' scores on five managerially relevant traits from the Cattell Sixteen Personality Factor Questionnaire (1973), namely, decisiveness, objectivity, emotional stability, warmheartedness, and passivity. Disconfirming the popular conception of women as being more warm and passive, women respondents scored as significantly less warmhearted, less passive and more objective than their male counterparts. However, while rating these respondents, their supervisors' evaluations conformed to the common stereotype of men being higher on the competency-related traits, and women on the expressiveness related traits, (Broverman et al, 1972). Due to the conflicting nature of results, these studies indicate the need for much more research on sex differences (Larwood and Powell, 1981).

All the studies cited above were conducted in a Western setting. S.B.G. Eysenck has conducted some 25 cross-cultural studies to validate the Eysenck Personality Questionnaire (Eysenck and Eysenck, 1975), such as Perera and Eysenck (1984). But they are with general populations (Bijnen, Van Der Net and Poortinga, 1986). What appears to be lacking are cross-cultural studies of male and female managers.

This study is of male and female managers in the United States and India using Cattell's Sixteen Personality Factors Questionnaire (Cattell, Eber, and Tatsuoka, 1970). Hui and Trianns (1985) review a number of research strategies for cross-cultural studies. The Direct Comparison approach (using the same instrument in both cultures) is the most popular and nearest to the one used here. We did use the Hindi translation of Cattell's 16 PF which Kapoor (1965)

indicates is "a valid tool for assessing the individual's personality". At the time of analysis the normative tables of India were not available to us so we used the US table for males and females, age 25-30. We have found no reports of cross-cultural studies of male and female managers using the 16 PF.

### Research Method

Two samples of managers were collected. One was collected from students attending management development courses at the Indian Institute of Management, Ahmedabad (N=111). One was collected from students attending Masters of Business Administration courses at an American business school (N=131).

The samples were selected by four criteria. First they had to be on a management education program. This gives a select group which is motivated and development oriented. Second, we wanted the groups to be similar in age. The Indian sample has an average age of 36.831, ranging from 23 to 66 with a mode of 35 and median of 35. The American group has an average age of 34.623 with a range of 22 to 58 and a mode of 35 and median of 34. Gender mix was the third criterion. The American sample is 67.9% female. And fourth, all the members of the samples had to have answered the three instruments.

Three questionnaires were used to collect the data. Cattell's Sixteen Personality Factors Questionnaire (16 PF) was used to collect data on personality. A concise description of the 16 factors measured by the 16 PF is: A, reserved to outgoing; B, concrete-thinking to abstract-thinking; C, emotionally unstable to stable; E, submissive to dominant; F, sober to enthusiastic; G, rule-breaking to rule-keeping; H, shy to socially bold; I, tough minded

to tender-minded; L, trusting to suspicious; M, practical to imaginative; N, naive to shrewd; O, self-assured to apprehensive; Q1, conservative to experimenting; Q2, group-oriented to self-sufficient; Q3, undisciplined to controlled; and Q4, relaxed to tense (Cattell, Eber, and Tatsuoka, 1970).

Hall's Change Agent Questionnaire (CAQ) was used to collect data on change agent styles. The questionnaire collects data on the order of preference and resistance to moving between the five styles: Client-centered (the classic Rogerian approach), change via compliance (the client is told what new behaviors are expected and monitored), change via credibility (a complex style encompassing both telling the client what is expected and centering on the client's needs), charismatic style (the middle of the road approach, using some of each style as required), and custodial style (when change cannot take place) (Hall and Williams, 1973).

The third questionnaire was a biographical questionnaire designed for this research. It contained 15 questions on personal and work-related data. Each subject was presented the three questionnaires in a controlled situation. They received the scores and explanation of the 16 PF and CAQ. The data was analyzed by ANOVA by sex and by country. T-Tests and statistical analyses were run for comparisons within countries.

### Findings

#### PERSONALITY FACTORS

When comparing the two samples by country and sex using the ANOVA, the following results were found:

Factor A. The samples are significantly different by country (.000). The American men (6.78) and women (6.45) are more outgoing and warmhearted than Indian men (5.25) and women (4.82).

Factor B. The samples are significantly different by country (0.000). The American men (6.75) and women (6.45) are more emotionally stable than <sup>Indian</sup> men (6.05) and women (5.31). Difference by sex approaches significance (.061) with the women being less emotionally stable.

Factor E. The samples are significantly different by country (.000). The American men (6.66) and women (7.05) are more dominant than the Indian men (5.82) and women (5.86).

Factor F. The samples are significantly different by country (.000). The American men (5.44) and women (5.98) are more enthusiastic than Indian men (4.32) and women (4.33).

Factor G. The samples are significantly different by sex (.001). The Indian women (5.47) and American women (4.76) are more rule-breaking than the Indian men (6.13) and American men (5.96).

Factor I. The samples are significantly different by sex (.001). The American women (6.26) and Indian women (5.69) are more tender-minded than the American men (5.07) and Indian men (5.43). There is a significant interaction effect (.035) due to the fact that the American women managers are much more tender-minded than American males while the Indian male and female are very close.

Factor L. The samples are significantly different by sex (.029) and country (0.002). The Indian men (5.50) and women (6.10) are more suspicious than the American men (4.49) and women (5.29). At the same time the women are more suspicious than the men.

Factor N. The samples are significantly different by sex (.027) and approach significance by country (.056). The Indian men (6.05) and women (6.10) are more shrewd than the American men (6.04) and women (4.88). The women are significantly different from the men. The Indian women are more shrewd than Indian men and American women are less shrewd than American men, resulting in a significant interaction effect (.019).

Factor O. The samples are significantly different by sex (.004). The Indian women (5.55) and American women (5.50) are more apprehensive than the American men (4.71) and Indian men (4.95).

Factor Q1. The samples are significantly different by country (.008). The American men (5.99) and women (6.52) are more experimenting than the Indian men (5.67) and women (5.35).

Factor Q2. The samples are significantly different by country (.003). The Indian men (6.53) and women (6.57) are more group-oriented than the American men (5.74) and women (6.10).

Factor Q3. The samples are significantly different by country (.001). The American men (6.36) and women (5.93) are more controlled than Indian men (5.43) and women (5.10).

Factor Q4. The samples are significantly different by sex (.050). The American (5.88) and Indian (5.71) women are more tense than the American (5.10) and Indian (5.43) men.

#### CHANGE AGENT STYLE

Credibility Style. The samples are significantly different by country (.000) and sex (.037). The American men (53.23) and women (54.59) use the style more than the Indian men (40.27) and women (45.18). At the same time the women use it more than the men.

Charismatic Style. The samples are significantly different by country (.005). The Indian men (50.12) and women (54.41) use the style more than the American men (49.56) and women (45.78). A significant interaction effect (.003) results from the Indian women using this style more than Indian men and American women using it less than American men.

Compliance Style. The samples are significantly different by country (.000). The Indian men (57.05) and women (55.75) use this style more than the American men (47.61) and women (47.61).

Custodial Style. The samples are significantly different by country (.000). The Indian men (59.87) and women (59.71) use the style more than the American men (49.91) and women (47.16).

#### BIOGRAPHICAL

Age. The samples are significantly different by country (.001) and sex (.000). The Indian men (40.20) and women (34.02) are older than the American men (35.35) and women (33.02). The women are younger than the men.

Job Level. The samples are significantly different by country (.004). The American men (6.02) and women (7.41) are more in staff positions than the Indian men (4.03) and women (4.14).

Subordinates. The samples are significantly different by country (.000). The Indian men (4.52 subordinates) and women (3.96) have more subordinates reporting to them than American men (3.59) and women (3.40) have.

Budgets. The samples are significantly different by country (.000). The American men (5.51) and women (5.00) have larger budgets than Indian men (2.40) and women (1.88).

Job Change. The samples do not significantly differ by country or sex. But there is an interaction effect (.033) resulting from the low number of job changes of Indian women (1.94) and the high number of American women (2.74) along with the similarity of American men (2.06) and Indian men (2.05).

Education. The samples are significantly different by sex (.011). The Indian women (3.51) and American women (3.34) are better educated (3 represents the bachelor degree) than the American men (3.30) and Indian men (3.02). The disparity of the educational levels of the Indian men and women result in a significant interaction effect (.023).

Income. The samples are significantly different by sex (.008) and country (.000). The American men (\$ 43, 360) and women (\$ 30, 560) earn more money than the Indian men (\$ 3, 350) and women (\$ 3, 080). At the same time, the women earn less than men. A significant interaction effect (.002) results from the large difference between American men and women along with similarity of Indian men and women.

### Discussion

Eleven differences by sex, at the .05 level of significance or better, result from the analysis. They contribute to a picture of how female managers are different from male managers in these samples regardless of country. These findings also show us how the female manager compares to male in their own country, as well as to the female manager in the other country.

### Personality

Female managers in these two samples appear to be less emotionally stable than male managers. Factor C measures the ego strength of the personality.

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Figure 1 about here

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But the scores of all components of the samples have relatively strong ego strength. This indicates that all of them have high capacity to withstand

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Figure 2 about here

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stress and emotional strain. High O, as this sample of female managers shows, is often associated with setting high goals and worrying over not meeting them. When high O is combined with Q4 Factor, which are the measurements of neurosis

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Figure 3 about here

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(both turning it in on oneself - high O, and pushing it outward - high Q4), the person may be self-blaming and easily upset.

The female manager profile in this sample appears to have some conflicts in the personality. For instance, they are low on G Factor, the superego



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Figure 4 about here

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strength. Persons low on G tend to break rules more readily than high G persons; they do not listen to the expectations of them by others. Combine this with the characteristics described in the above paragraph, "Here we have someone who would have us believe that he disregards the standards of society, but the intense guilt to which he admits belies his interpretation." (Karson and O'Dell, 1976:50).

The description so far sounds very negative. But the positive side is that these personality types are highly prized in business. The female in these samples is driven by a need to succeed and will put much energy into work. The neurotic tendencies described here are signs of a hard-working individual. The fact that these tendencies (high goals, self-blaming, and rule-breaking) set up conflicts is of concern to the individual, but usually not to the employer.

One of the personality characteristics of the female managers in these samples tends to confirm feminine stereotypes, high I (tender-mindedness).

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Figure 5 about here

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"In various questionnaire studies, the premsic, 1+ person has shown a fastidious dislike of 'crude' people and rough occupations; a romantic liking for travel and new experiences; a labile, somewhat unrealistic, imaginative, aesthetic mind; a love of dramatics; and a certain impracticality in general affairs." (Cattell, Eber, and Tatsuoka, 1970:83). High I people like nice things and enjoy drawing attention to themselves as well as caring about the welfare of others.

The high L (suspicious), technically called protension, is characteristic of the female manager sample and signifies projection and inner-tension.

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Figure 6 about here

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This is a person who can be contemptuous of the average, having a high number of annoyances, and uninfluenced by the views of prominent people. These are inner-driven persons who go against the odds and handle the anxieties associated with that by projecting their own-inner-tensions onto others.

The last personality characteristic is N Factor for which high is shrewd, good at judging the repercussions of behavior. The low N person is naive, poor at seeing the implications of their behavior and tends to say what comes to mind, regardless of the circumstances. The females are diffe-

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Figure 7 about here

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rent from the males in each sample: the Indian women are a little more shrewd than their counterparts (already very shrewd) and the American women are much less shrewd than their counterparts. Much of the success of a manager may be predicted by this characteristic. This may help explain some of the biographical data; namely, the fact that the Indian women are nearer in salary and level of management to Indian managers than American women are to American men - inspite of being 6 years younger.

In summary of personality, the seven characteristics in which the managers differed by sex indicate a female manager who is different from the male: more hard-working, driven achiever with little regard for less than

that, although conflicted and hurting from the experience. As for the female and male comparisons within each country, the American female manager appears to be more different from the American male manager than the Indian female manager appears to be from the Indian male manager. This is particularly evident in Factors G (American female is much more rule-breaking); I (American female is much more tender-minded); and N (American female is much more naive). N factor is the only example of the female managers in the two samples being opposite (Americans naive and Indians shrewd).

#### Change Agent Style

The analysis by ANOVA indicated that only one of the five change styles is significantly different by sex. The female manager uses the credibility

Figure 8 about here

style more than the male manager. This is the more complex style incorporating both the concern for the readiness of the changee to change and the concern to have the changee meet the expectations of the situation. It might be suggested that this style would be appropriate for the personality of the females in this sample. It is a hard-working change style - trying to satisfy all needs. The males tend to tell the changees more quickly and directly what to do.

#### Biographical

Seven biographical factors were suitable for the ANOVA. Four showed no significant differences by sex and three showed significant differences. Job level showed no difference by sex. The women in both samples tended to

be more in staff positions than line management, but not significantly different. The Indian sample has 76.6% in management and the American sample has 72.1%.

The samples showed no difference by sex of the number of subordinates reporting to them. In both countries the females had less subordinates than the males, but not significantly so.

The size of the budget controlled differed significantly by country, but this is probably due to the different economies. The female managers control slightly smaller budgets than the males in each country, but the differences are not significant.

The number of job changes is not significantly different by sex. There is an interaction effect due to the large number of changes by American women

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Figure 9 about here

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and the low number among Indian women and the similarity of American and Indian men. For instance, 20.6% of the American women report 4 job changes in the past five years and only 5.9% of Indian females do. The Indian women report that 51% have moved to a new job once in 5 years while the American women report 20.6% have moved only once in the same period. The American female manager moves between jobs more than the other three components of the samples.

Three of the biographical data were significantly different by sex. The female managers are younger than the male manager. There is a greater

difference in age between Indian male and female managers: 40.20 and 34.02. The Indian female manager in this sample is over six years younger than her counterpart. While the American female is significantly younger than her counterpart, the spread is just over two years. This data influences the significance of some of the variables in which no difference appeared. Budget size, number of subordinates, and job level of the Indian female manager is not significantly different from her male counterpart and she is six years younger. In effect, Indian female managers are far ahead of American female managers in job status.

The female and male managers are significantly different in the amount of education they have. The women are better educated in both countries.

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Figure 11 about here

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But the Indian women are the best educated of the four components of the samples and the Indian men are the least educated. Having said this, the entire sample is at the bachelor level or above.

Income is always an important indicator. The countries differ significantly, but that is probably due to difference in the two economies. The

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Figure 12 about here

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important data here is the difference in the gap between the males and females in America as compared to India. The American male earns 41.8% more than the American female and the Indian male earns 8.7% more than the Indian female.

Qualitative data on marital status is illuminating. The American female sample is 19.0% single, 45.2% married, 4.8% separated, 9.5% divorced. The American male sample is 12.7% single, 83.1% married, 1.4% separated, and 1.4% divorced. The Indian female sample is 39.2% single, 58.8% married, nil separated, and 2.0% divorced. The Indian male sample is 15% single, 83.3% married, nil separated, and 1.7% divorced. The American female manager is the least married, the most separated and divorced of any component of the samples.

In summary of the biographical characteristics. Four variables show a female manager who is younger, better educated and earns less than the male manager. The American female manager changes jobs the most frequently and has the least stable marital situation. Comparing the Indian and American female manager, the American is behind in income, and job status relative to age.

### Conclusions

In conclusion, our data indicate to us that the female managers in these two samples are different from the male managers. The differences are across all the areas that we investigated; personality, change agent style and biographical characteristics. Our main finding is that the American female manager is further behind the salary of male American managers than her Indian counterpart while being comparable in education and job status.

Cross-cultural research has many hazards. One is getting comparable samples. More research is required to improve the comparability of our samples in order to refine our findings.

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- Steinberg, R. and Shapiro, S. Sex differences and personality traits of female and male Masters of Business Administration Students. Journal of Applied Psychology, 1982, 67 (3), 306-310.

**FACTOR C**  
**(Emotionally Stable)**

**C .001**  
**S .061**  
**I .426**

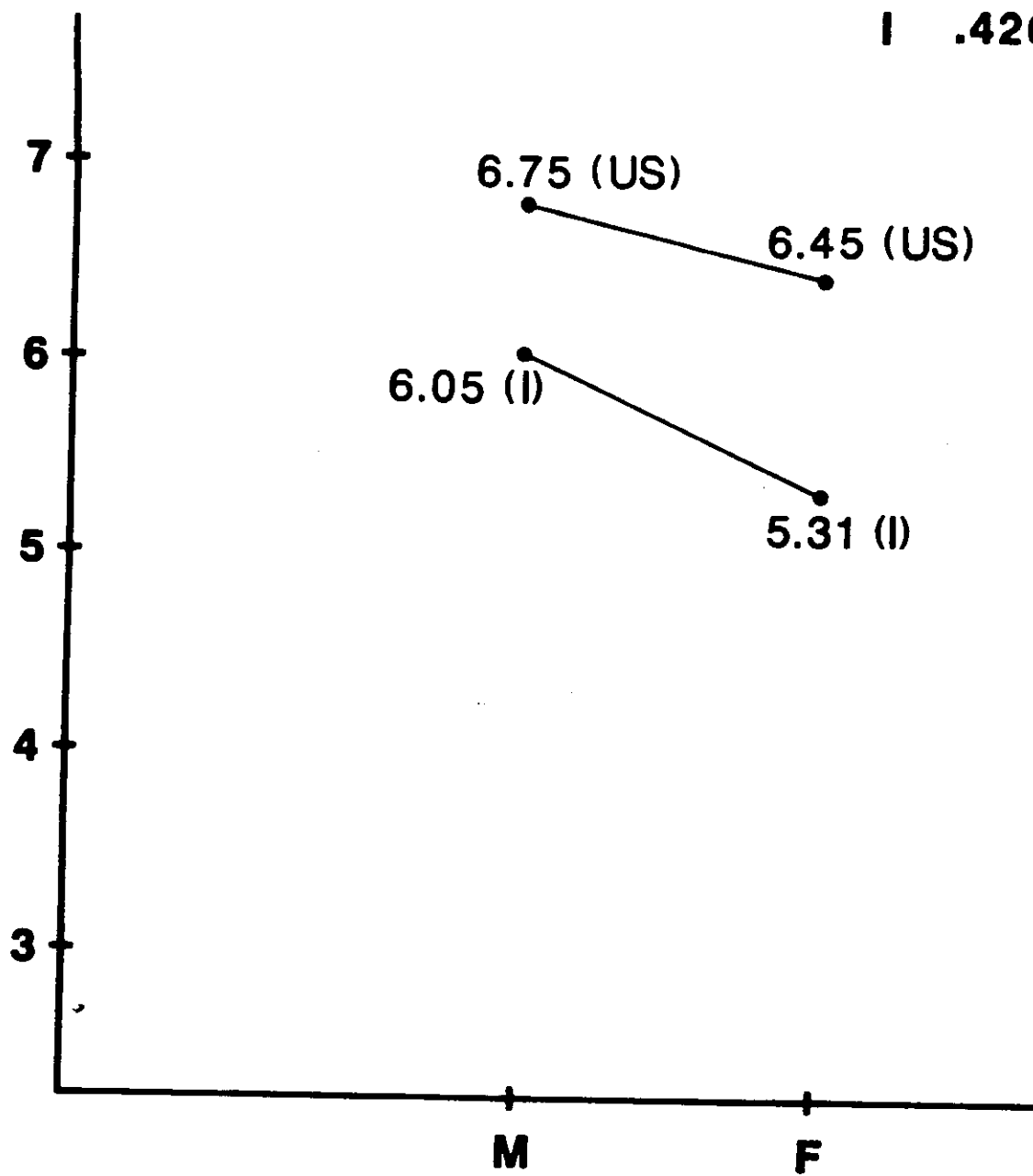


Figure 1

**FACTOR O**  
**(Self-Assured/Apprehensive)**

**C .475**  
**S .004**  
**I .686**

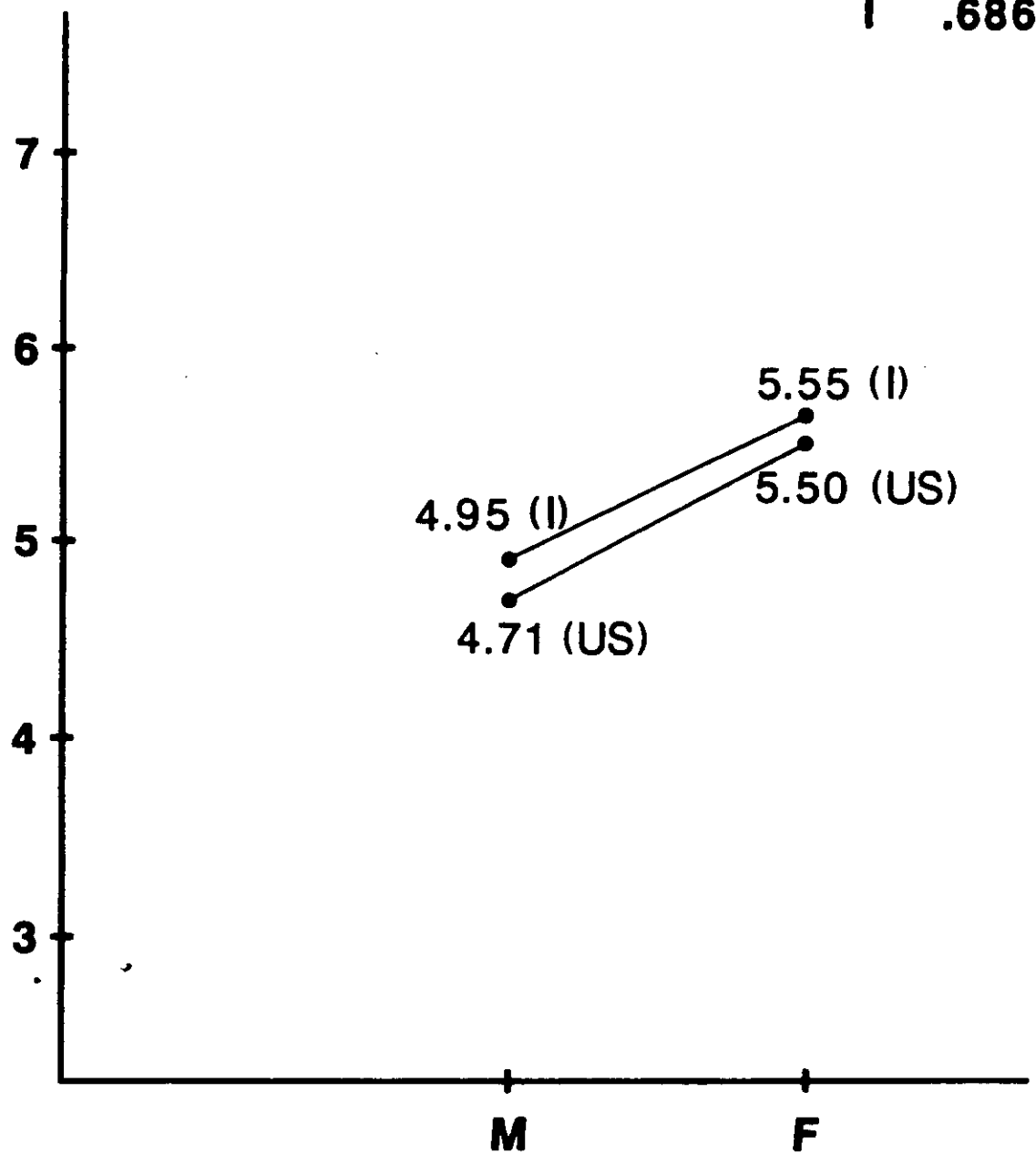


Figure 2

**FACTOR Q4**  
**(Relaxed/Tense)**

**C .611**  
**S .050**  
**I .347**

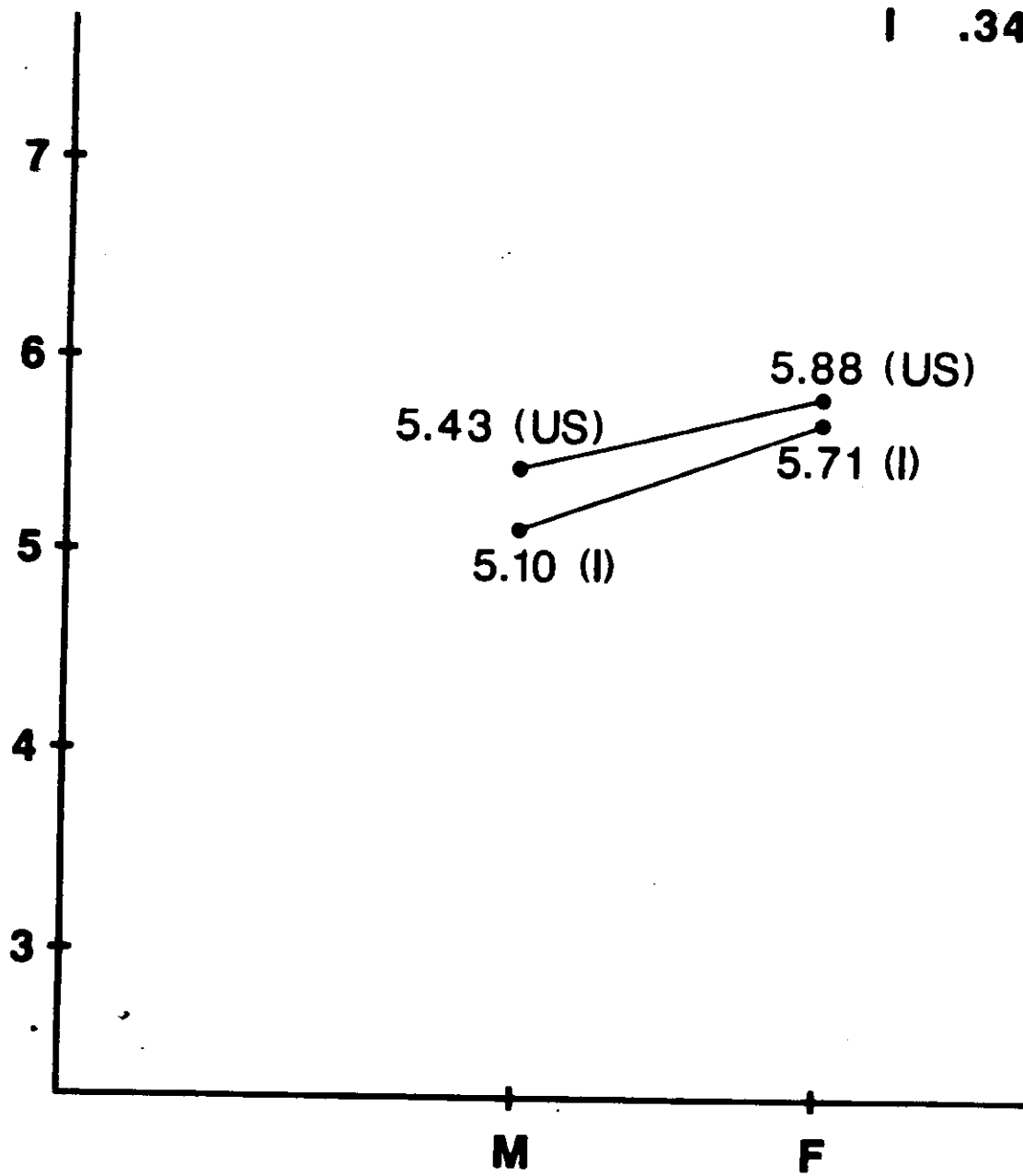


Figure 3

**FACTOR G**

**(Rule-Breaking/Rule-Relying)**

**C .143**

**S .001**

**I .324**

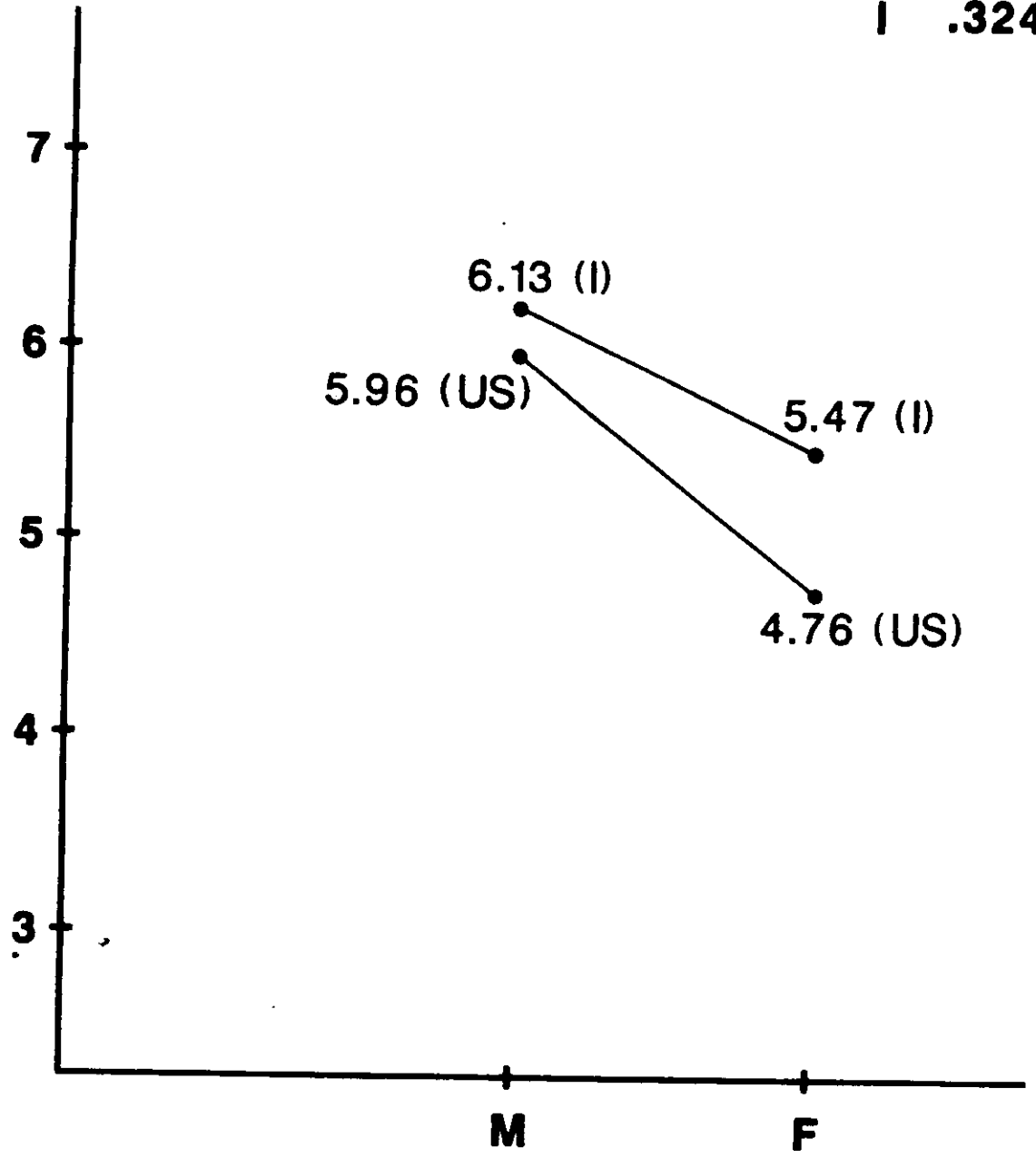


Figure 4

**FACTOR I**  
**(Tough/Tender-Minded)**

**C .991**  
**S .001**  
**I .035**

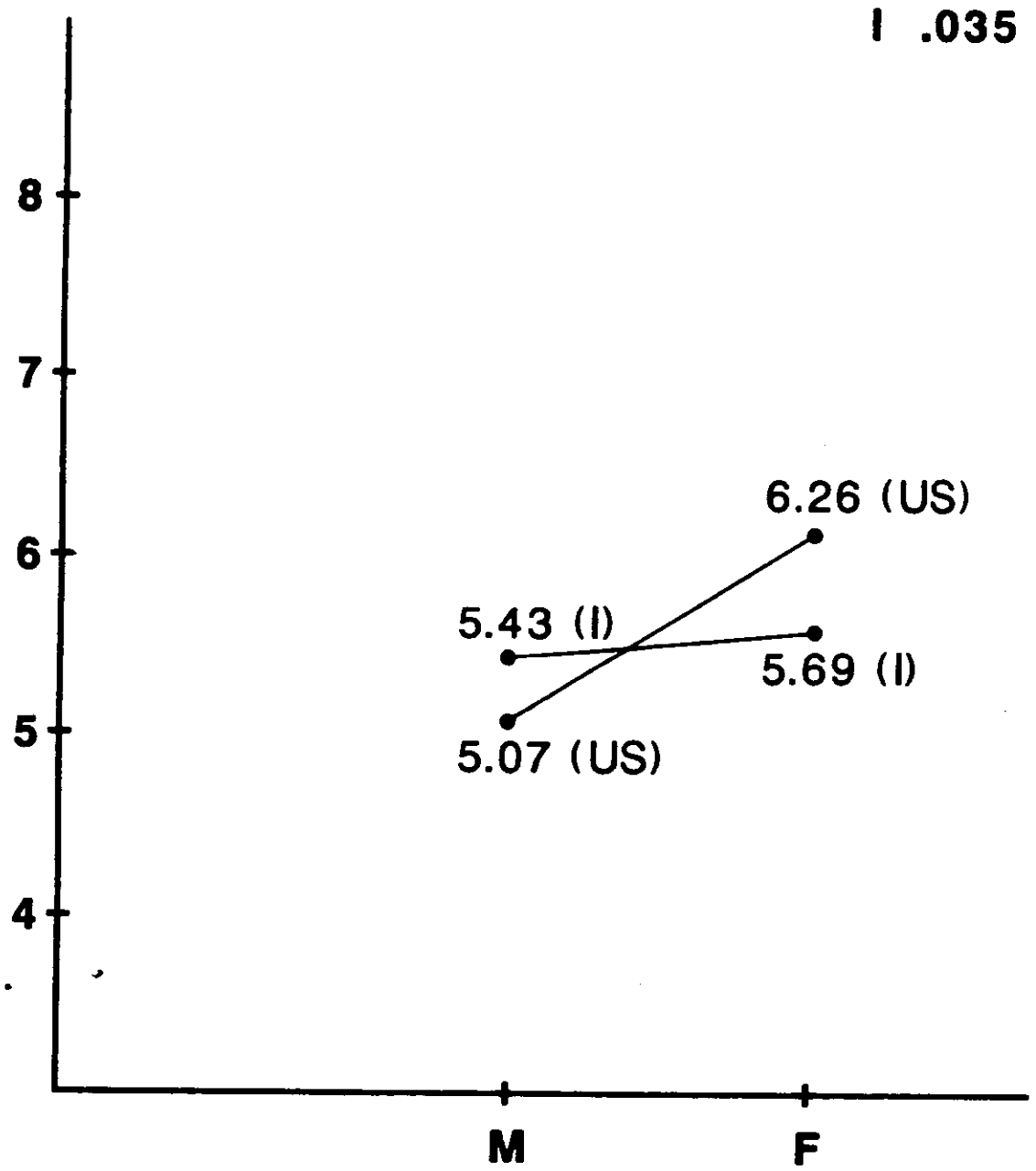


Figure 5

**FACTOR L**  
**(Trusting/Suspicious)**

**C .002**

**S .029**

**I .843**

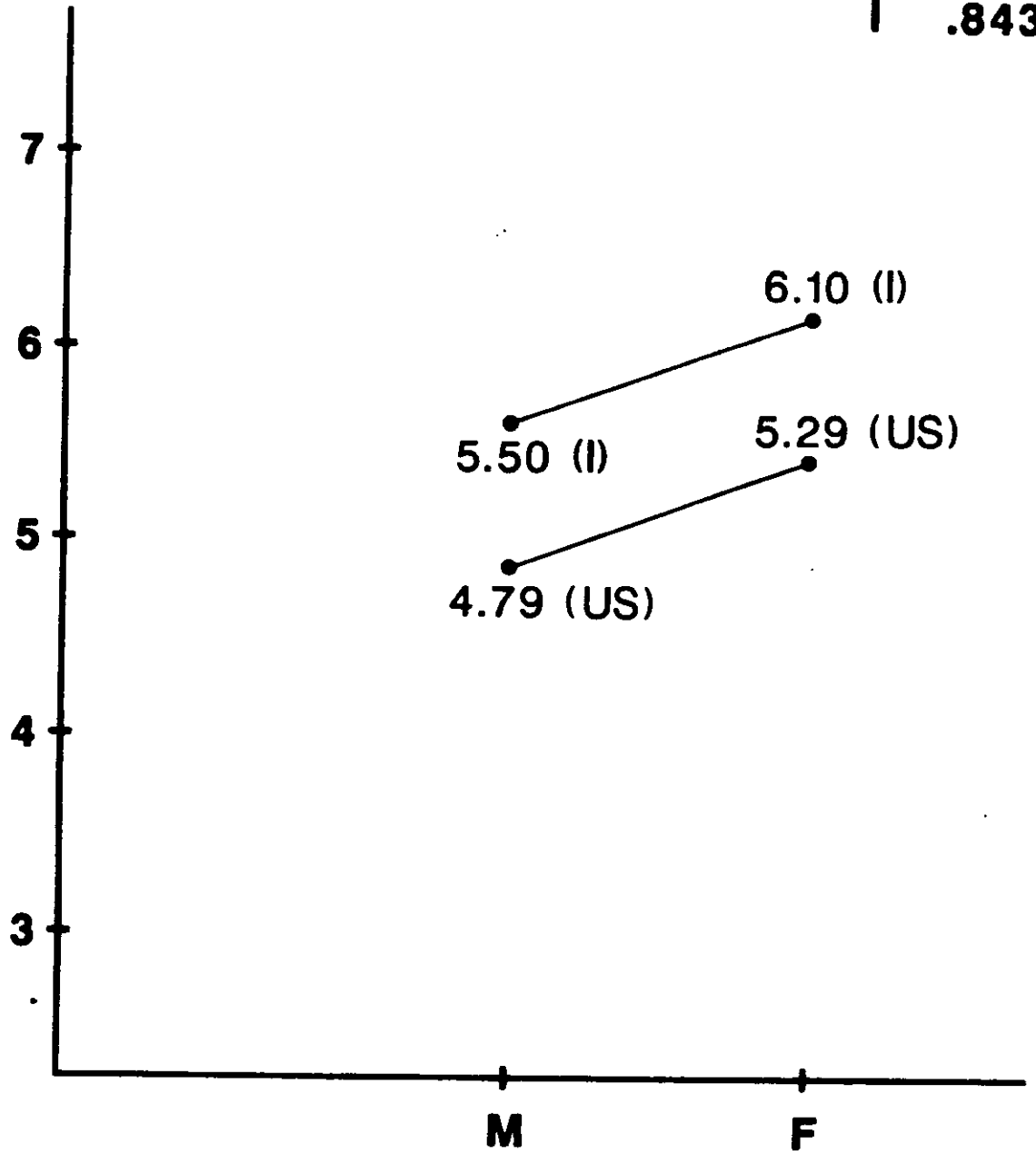


Figure 6

**FACTOR N**  
**(Forthright/Shrew)**

**C .056**

**S .027**

**I .019**

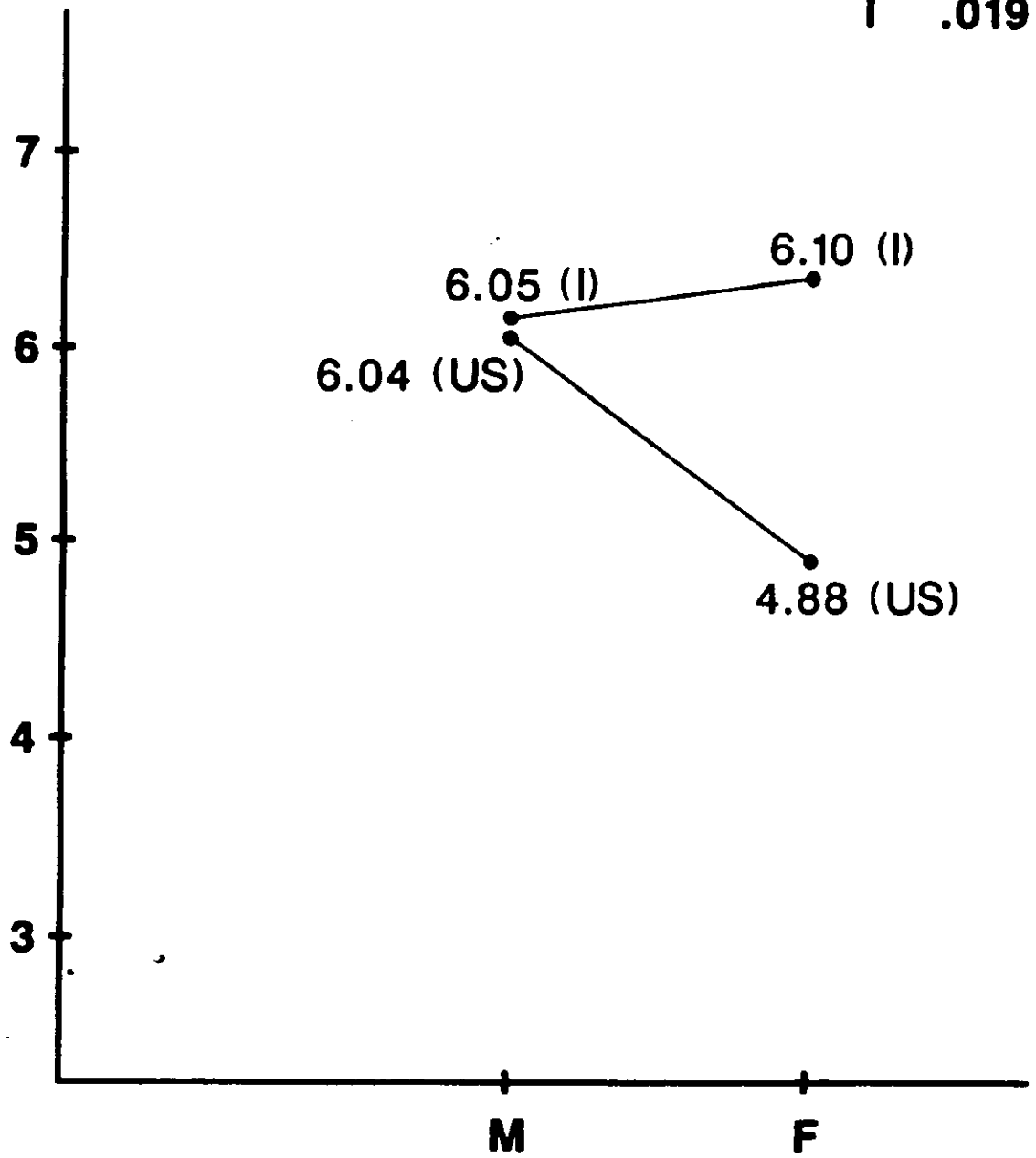


Figure 7



**CREDIBILITY CHANGE  
AGENT STYLE**

**C .000**

**S .037**

**I .269**

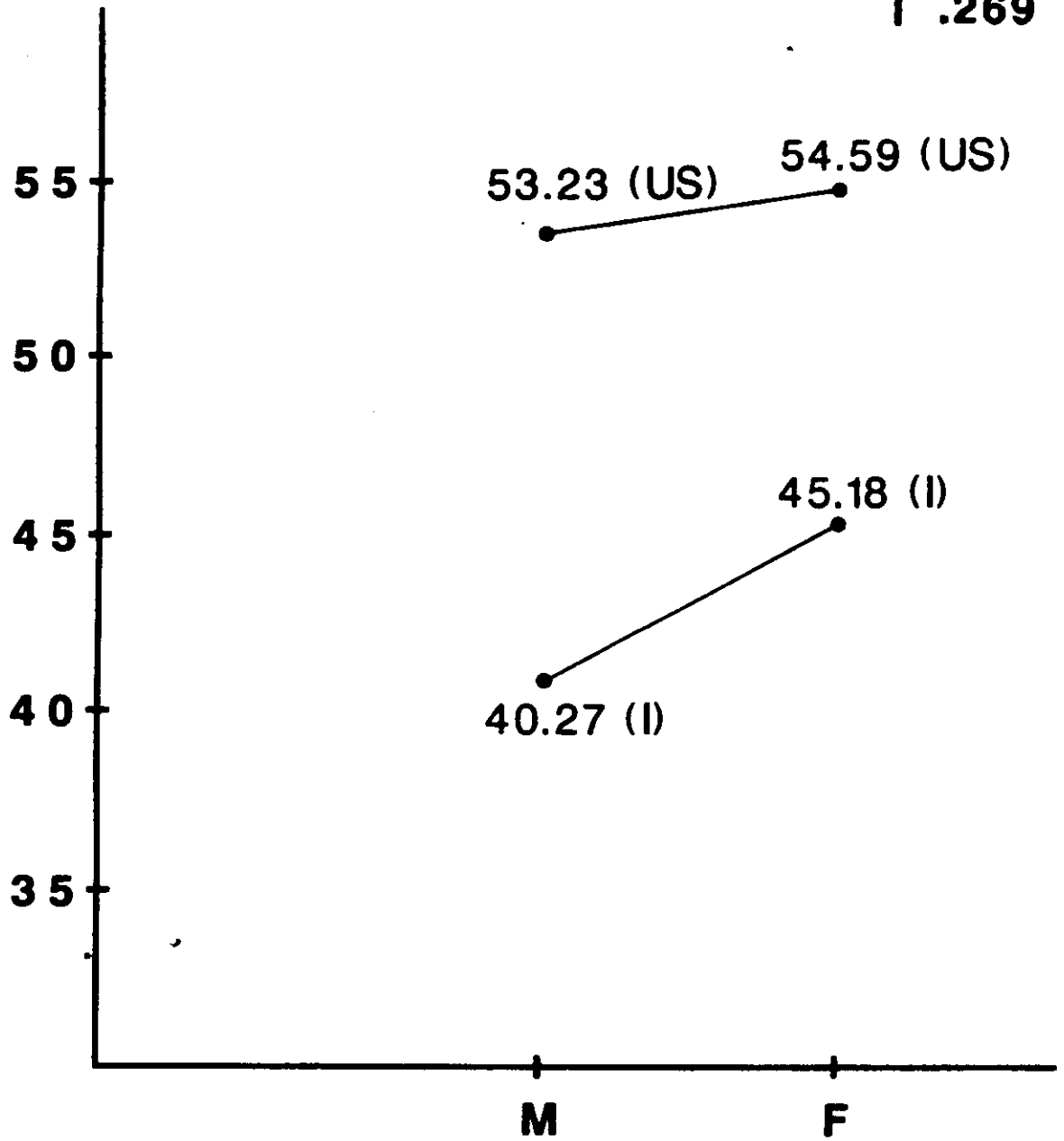


Figure 8

# JOB CHANGES

C .080

S .176

I .033

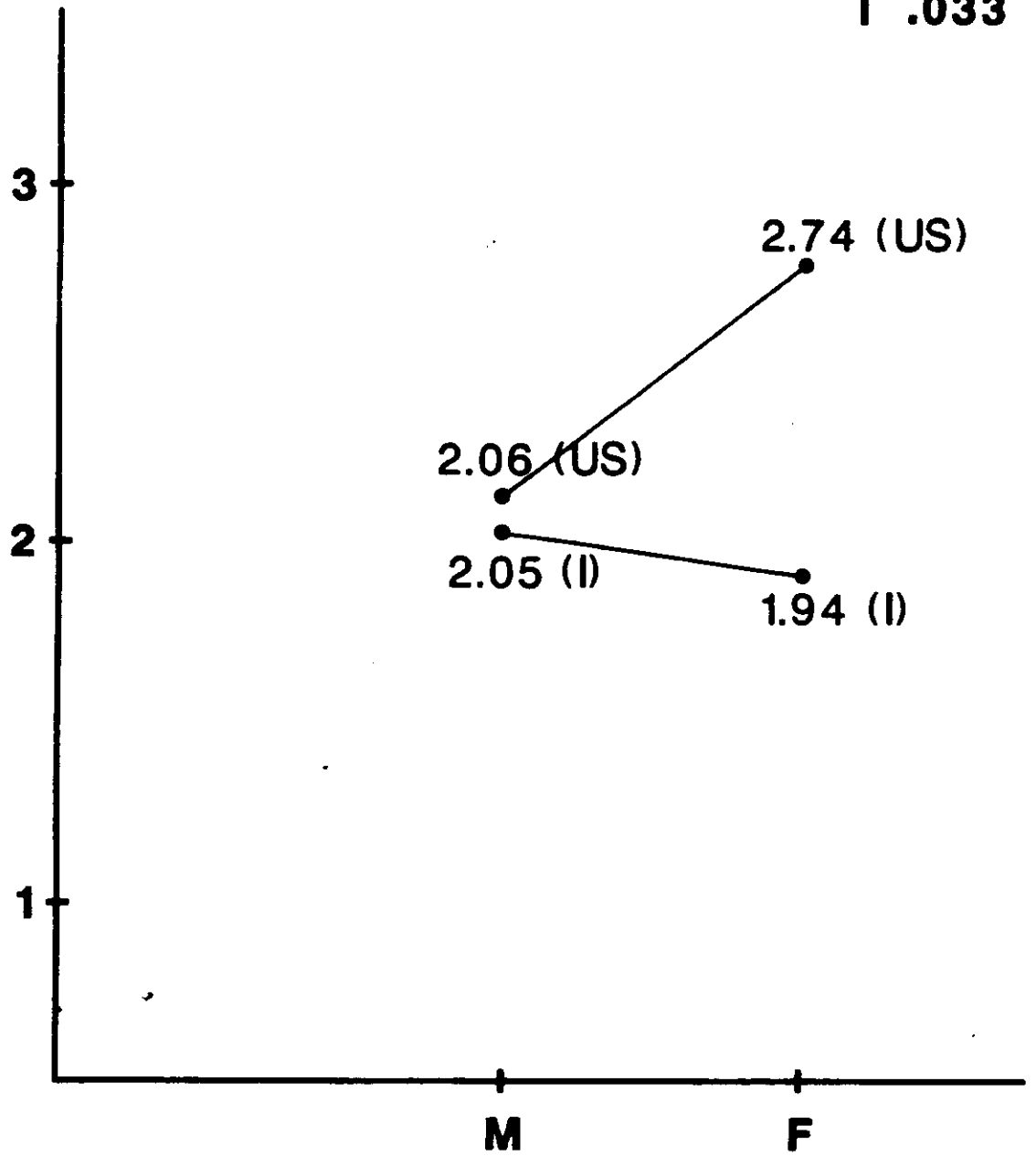


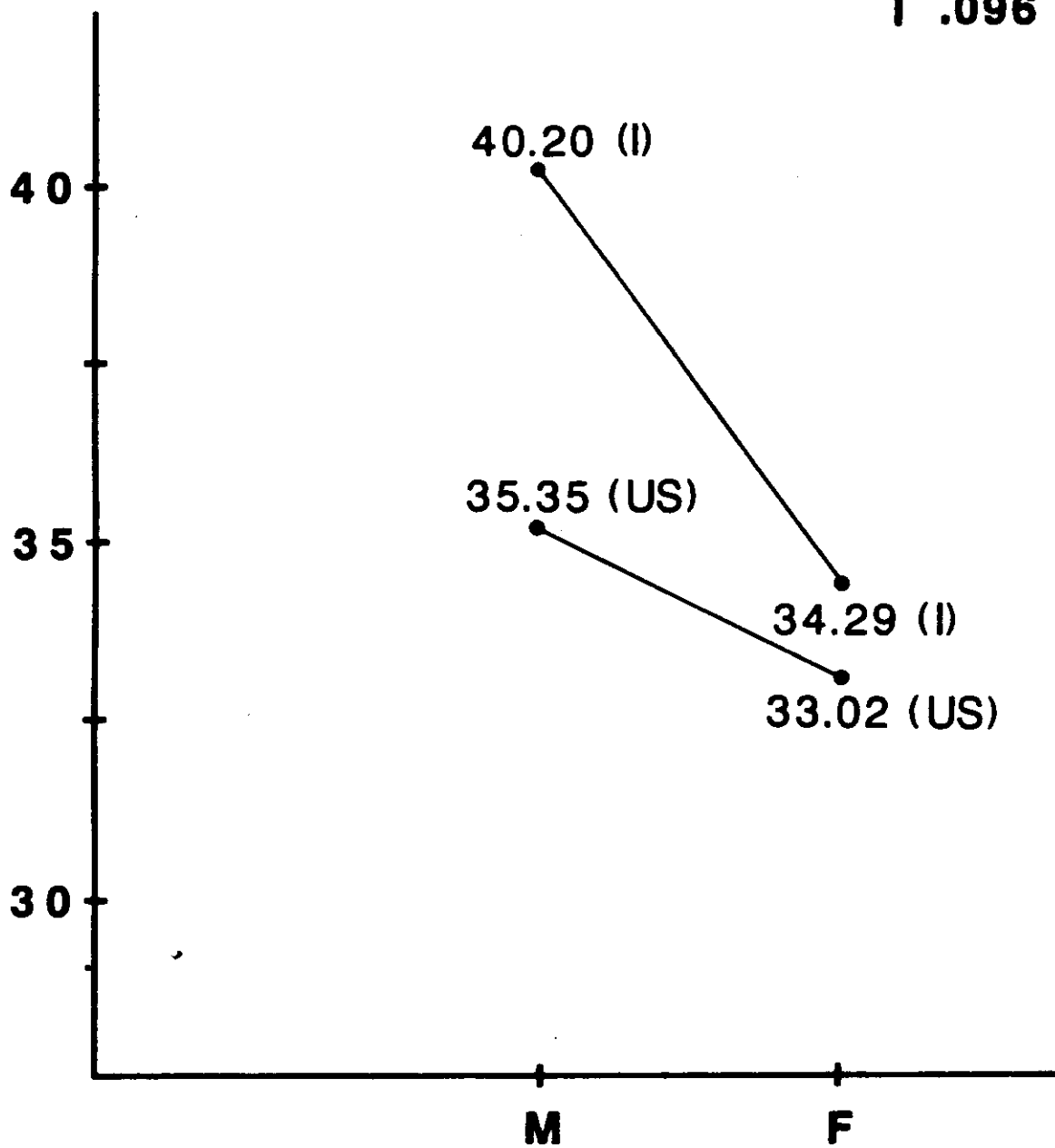
Figure 9

**AGE**

**C .001**

**S .000**

**I .096**



**Figure 10**

**EDUCATION**

**C .272**

**S .011**

**I .033**

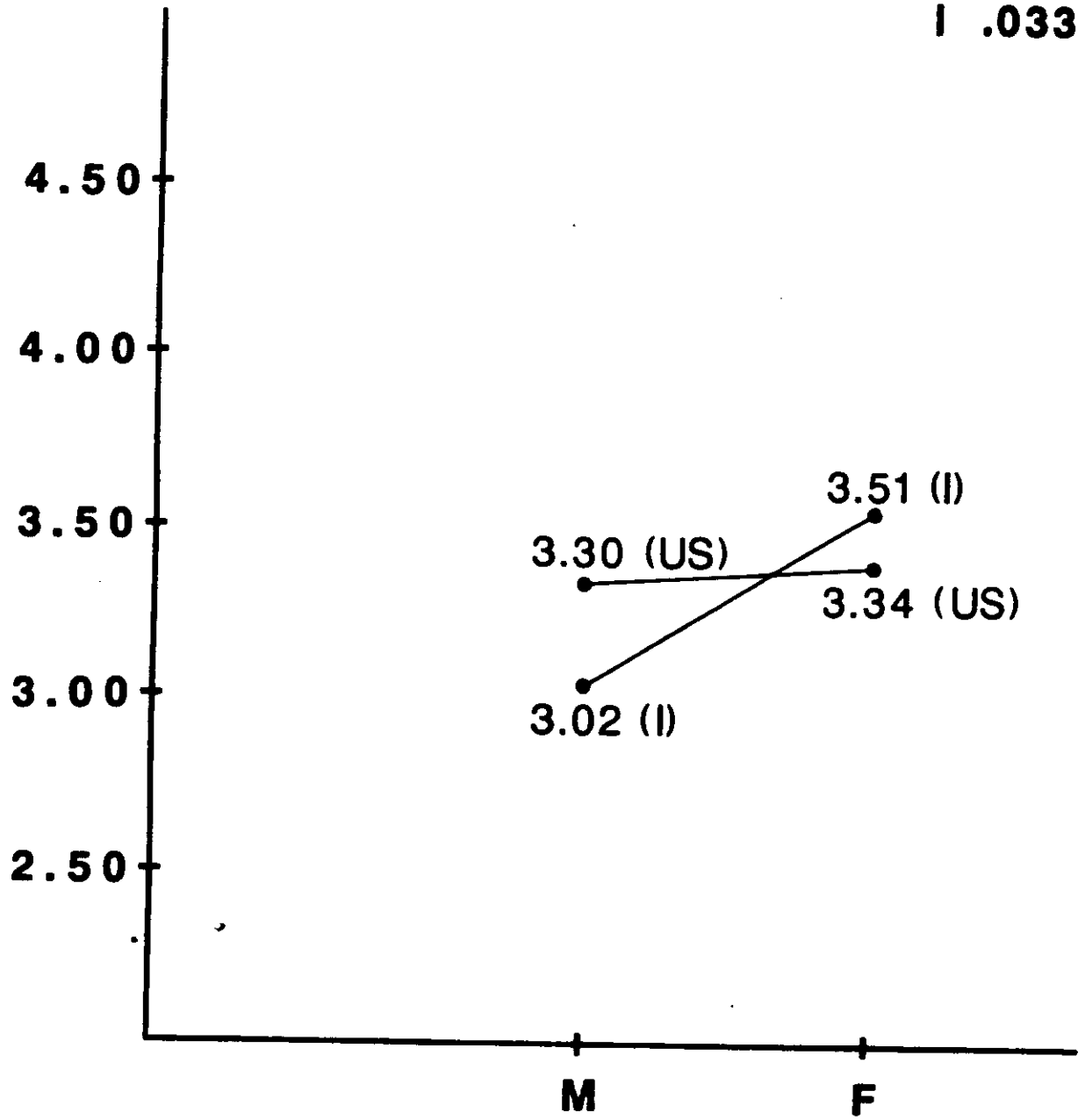


Figure 11

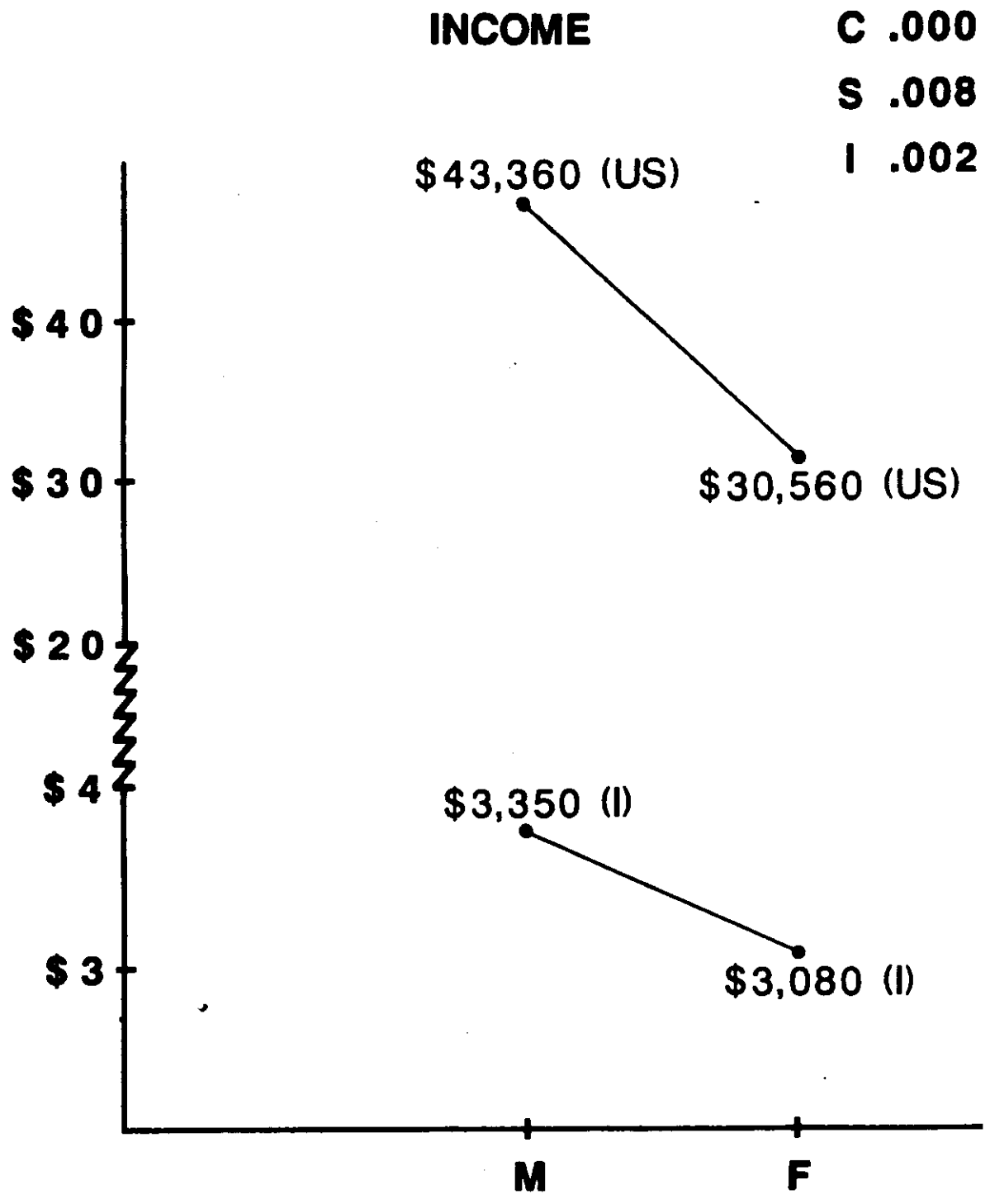


Figure 12