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**ABSTRACT**

The purpose of this study was to expand the previous limited locus of control focus of gender differences cross-nationally by shifting to an attributional model for both successes and failures in both achievement and affiliation domains in order to test the hypothesis that women differ from men in their attributional patterns for achievement and affiliation across various attributional factors for success/failure outcomes. The Multidimensional-Multiattributinal Causality Scale was administered to a total of 684 college students from India, Japan, South Africa, Yugoslavia, and the United States. There were significant differences between males and females across all five countries for achievement attributions to task, and for the internal/external dimension. The differences for attributions to ability, effort, and luck, as well as for the stable/unstable dimension, were not significant. All these differences were generally small, and so may not be meaningful. Gender differences appeared to be stronger in the affiliation than in the achievement domain.  
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Gender Differences in Multiattributonal Causality for  
Achievement and Affiliation in Five Cross-National Samples

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Gender Differences in Multiattributinal Causality for  
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Changes are taking place in the status of women (Frieze, Parsons, Johnson, Ruble, & Zellman, 1978; Mednick, Tangri, & Hoffman, 1975). No doubt the perceived degree of personal potency experienced by women may play a decisive role in this change. Traditionally, women have not attributed their successes to internal factors which are perceived to be changeable, such as effort or skills acquisition (Crandall, Katkovsky, & Crandall, 1965; Dweck & Reppucci, 1973; McMahon, 1972; Nicholls, 1975). Rather, luck has been the major causal attribution for success. Since luck is external and uncontrollable, it offers no consistent predictability for future successes. Conversely, failures have been attributed by women to lack of ability, which is not likely to be changeable and therefore cannot be controlled by the individual. It is no wonder then that a low success-expectation cycle that diminishes the possible effects of success while increasing the negative effects of failure might be set into motion.

More recent studies have not found this differential attributional pattern for success and failure in women. Frieze, et al (1978) suggested that a more general attributional pattern of externality for women seems to be emerging. In a couple of studies women rated task in both success and failure conditions as easier than men did (Bar-Tal & Frieze, 1977; McMahon, 1972). Other studies suggested that females made greater use of luck in both success and failure conditions (Feather, 1969; Simon & Feather, 1973). If women are successful but the task is rated as easy or the success attributed to luck, then it could be hypothesized that women might

undervalue their success, take less responsibility for it, and finally experience little pride when they are successful. Support for this view is found in Maccoby and Jacklin's synthesis (1974). In contrast to men, college-age women perceived less control over their destinies. Similarly, Duke and Nowicki (1974) found that an external locus of control predicted achievement for females in contrast to internality for males. Typically, women's achievement has been associated with an internal locus of control or no association is found (Stipek & Weisz, 1981). Recently, Strickland and Haley (1980) found that males and females expressed personal control expectancies on different items and in different ways, as assessed by Rotter's (1966) I-E Scale. For example, males more strongly endorsed external items relating to luck, whereas females tended to be more external on items relating to personal influence, which is probably related to affiliation.

If indeed Triandis (1978) is correct that fundamental issues about human nature can best be approached through cross-cultural investigation, then the issue of gender differences in attributions for achievement and affiliation is a case in point. (Note that the term gender is used rather than sex because the latter more appropriately refers to biological factors whereas the former refers to sociocultural factors [Unger, 1979].) Different societies at different stages of economic, industrial and political development, and with varying degrees of prevailing ideologies concerning men and women, may endorse different social models in order to cope with the changes taking place in the status of women (Mednick, Tangri, & Hoffman, 1975). Obviously, the latitude of options available to women varies among nations.

No specific gender differences were found in the previously reported studies in Nigeria (Reminanis, 1977), Greece (Malikioski & Ryckman, 1977), the United States (Gregory, 1978; Lefcourt, Hogg, Struthers, & Holmes, 1975; McGinnies, Nordholm, Ward, & Bhanthumnavian, 1974; Malikioski & Ryckman, 1977; Reimanis, 1977), South Africa (Barling & Finchman, 1978, New Zealand or Japan (McGinnies, et al., 1974). Although Parsons and Schneider (1974) reported females expressed significantly higher beliefs in luck and fate than did males, as well as in their inability to influence their own success in leadership situations, no differences were found in academic, personal respect and political beliefs. The one surprising finding was that Swedish women, who were thought to be in the forefront of the female emancipation movement, were found to report higher beliefs in external control than Swedish males (McGinnies, et al., 1974). This, however, may be an artifact of their younger age (i.e., secondary school) and the fact they still lived at home and were thus under familial influence.

Most of these cited cross-cultural/national studies of gender differences have employed Rotter's (1966) Internal-External Scale or a variant of it. As Weiner, Heckhausen, Meyer and Cook (1972) have shown, the locus of control and stability dimensions have been confounded in the locus of control literature. Internality has been linked with a stable cause (ability) as well as with an unstable cause (effort). Similarly, externality is linked with a stable (task difficulty/context) and unstable cause (luck). Attribution to an unstable (variable, altering) cause can lead to behavioral predictions that are in opposition to those of a stable attribution even though both the unstable and stable attributions could be to an internal ascription (Weiner, 1979).

Both Munro (1979) and Lefcourt (1978) have criticized the use of generalized locus of control scales and have argued for goal specific multiattributonal assessment in which differentiations are made for various situations, different agents of action, and different consequences. Lefcourt, VonBaeyer, Ware, & Cox (1979) have developed the Multidimensional-Multiattributonal Causality Scale (MMCS) in part to answer the criticism of the generalized locus of control scales, which fail to differentiate achievement and affiliation contexts and are not balanced across success and failure situations.

The purpose of this study was to expand the previous limited locus of control focus of gender differences cross-nationally by shifting to an attributional model for both successes and failures in both achievement and affiliation domains in order to test the hypothesis that women differ from men in their attributional patterns for achievement and affiliation across various attributional factors (ability, effort, task, luck) for success/failure outcomes. Although this was not tested, one could hypothesize that the gender differences in these two domains are more sharply delineated in those nations where sex role stereotypes are perceived to be still prevailing. If indeed social changes are taking place and may be most apparent among university women, then such women should be perceiving personal control in both achievement and affiliation domains but differentially.

#### METHOD

In order to obtain a representation of university students from both developing and developed countries and from both eastern and western cultures, requests were sent to a large number of countries. Usable data were obtained from the following countries: India, Japan, South Africa, U. S. and Yugoslavia. Where English was not a common language, the

MMCS was translated into the native language. To validate the authenticity of the original, the back translation method was used (Brislin, 1980). Differences in translation were resolved by a third bilingual. Where there was no conceptual equivalence, the decentering method was used (Werner & Campbell, 1970). This approach involved changing the language when necessary to produce a smooth, natural-sounding version of the second language. Prior correspondence with potential collaborators helped to determine if the definitions of achievement and affiliation and the various attributions had a similar meaning. One country was eliminated through this process.

### Subjects

The subjects consisted of 684 (314 males; 370 females) university students (age range 19-24) currently enrolled in teacher training (125 males, 188 females), physical science (93 males, 86 females), and social science (96 males, 96 females).

### Multidimensional-Multiattributinal Causality Scale (MMCS)

The 48 item MMCS consisted of 24 items tapping the achievement domain and 24 items tapping the affiliation domain. Within each domain there were six items for each of the four attributions (ability, effort, task, and luck) randomized across successes and failure items. Here are a few items randomly chosen from the MMCS. In parentheses are the attributional assignment, success/failure condition, and dimension. "The most important ingredient in getting good grades is my academic ability" (ability, success, achievement). "In my experience, loneliness comes from not trying to be friendly" (effort, failure, affiliation). "My academic low points sometimes make me think I was just unlucky" (luck, failure, achievement). The scale permits separate measurement of internality and externality, unlike typical I-E Scales, on

the assumption that scores on internality and externality may be independent (Collins, Martin, Ashmore, & Ross, 1973). According to Lefcourt (1978), test-retest correlations ranged from .51 to .62. He also found that items discriminated between achievement and affiliation dimensions. Four separate experimental studies establishing predictive validity were reported by Lefcourt (1978).

### Procedure

The introduction and procedure were the same for all countries involved and followed Lefcourt's procedures. The respondents indicated on a separate answer sheet the degree to which they agreed or disagreed with each statement, using a Likert format where A indicated "I agree," B "I mildly agree," C "I agree and disagree equally," D "I mildly disagree," E "I disagree."

The answer sheets were collected by the collaborators in the various countries and sent to the authors.

### RESULTS

A set of six unweighted four-way analyses of variance with one repeated measure was performed for achievement and again for affiliation. Each 5 x 2 x 3 x 2 analysis of variance assessed the effects of five countries, both genders, and three academic majors repeated across both success and failure situations. Only results relating to gender are reported; more detailed country and success/failure results are summarized elsewhere (Chandler, Shama, Wolf, & Planchard, 1981). Each of the four causal attributions, ability, effort, task and luck, served as dependent variables. Item responses were scores from 1 (disagree) to 5 (agree), with scores ranging from 3 to 15 for each attribution. In addition, two composite indices were also used as dependent measures. An index of overall internality



was obtained by summing the attributions for ability and effort (both internal) and subtracting those for task and luck (both external). Similarly, both stable attributions (ability, task) were summed and both unstable attributions (effort and luck) were subtracted to provide an overall stability index. Scores for these dimensional indices had a possible range from -20 to +20, with negative scores indicating external or unstable attributions and positive scores internal or stable attributions.

Scheffé multiple comparisons were performed following significant ANOVA effects to assess the significance of differences among individual means. Simple effects (Winer, 1971) were assessed for significant interaction effects.

#### Achievement Attributions

There was a significant difference between males and females for attributions to task,  $F(1, 654) = 6.98, p < .01$ , but not to ability, effort or luck. Females ( $M = 8.20$ ) attributed their achievement significantly less than males ( $M = 8.73$ ) to task factors. This contributed to the finding that females ( $M = 5.20$ ) were significantly more internal overall than males ( $M = 4.12$ ). There was no significant difference between the genders on the stability dimension. However, tests of simple main effects for each country for the significant country x sex interaction for task,  $F(4, 654) = 3.52, p < .008$ , indicated significant differences between male ( $M = 9.89$ ) and female ( $M = 7.97$ ) subjects only for India ( $p < .01$ ), with males on the average making higher task attributions. This finding is further differentiated as a result of a significant three-way country x gender x success/failure interaction for task,  $F(4, 654) = 2.86, p < .03$ , indicating that Indian females attributed their achievement successes, but not their failures, significantly less to task factors ( $p < .01$ ). This is depicted in Figure 1. Thus, the

significant gender differences for both the task attributions and overall internality can be attributed largely to Indian women's perceptions of less task influence on their achievement successes. Additionally, South African males and Yugoslavian females attributed their failures significantly more than their successes to task factors ( $p < .05$ ).

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Insert Figure 1 about here

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In addition, a significant ordinal gender x success/failure interaction for ability attributions,  $F(1, 654) = 5.65$ ,  $p < .02$ , indicated that both males and females attributed their successes to ability (Male  $M = 11.52$ , Female  $M = 11.42$ ) significantly more than failures to lack of ability (Male  $M = 7.20$ ; Female  $M = 7.86$ )...

There was also a significant gender x success/failure ordinal interaction on the stability dimension,  $F(1, 654) = 7.27$ ,  $p < .008$ , as well as a significant country x gender x success/failure three-way interaction,  $F(4, 654) = 2.69$ ,  $p < .03$ . Both genders believed the attributional causes were significantly more subject to change (i.e. unstable) for their failures than for their successes. However, females ( $M = -2.96$ ) attributed their achievement successes to unstable causes significantly more ( $p < .01$ ) than males ( $M = -2.00$ ). Just the opposite was found for failures, with males ( $M = -4.03$ ) attributing significantly more to unstable causes ( $p < .05$ ) than did females ( $M = -3.60$ ). Scheffé's a posteriori comparisons for a three-way interaction once again indicated that this difference was primarily due to the strong gender differential for Indian subjects consistent with the pattern for the two-way interaction. Japanese and American men also indicated a significantly stronger belief in changeable (i.e. unstable) causes for failures than for successes ( $p < .05$ ).

### Affiliation Attributions

Females attributed social affiliation significantly more to ability,  $F(1, 635) = 5.61, p < .02$ , effort ( $F = 3.99; p < .05$ ), and overall internal causes ( $F = 11.45, p < .001$ ) than did males. No significant differences occurred for task, luck, or overall stability. Means are reported in Table 1 for both genders.

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Insert Table 1 about here

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In addition, there were significant country x gender and country x gender x success/failure interactions on the internality composite. These results are summarized in Table 2. Tests of simple main effects for each

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Insert Table 2 about here

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country for the country x gender interaction indicated significant differences for Indians ( $F = 4.60; df = 1, 635; p < .05$ ) and Japanese ( $F = 6.89; df = 1, 635; p < .01$ ), with females on the average making higher internal attributions. The differences for South Africans ( $F < 1.0; NS$ ), Americans ( $F < 1.0; NS$ ), and Yugoslavians,  $F(1, 635) = 3.50, p < .10$ , were not significant. An analysis of the simple interaction effects for the three-way country x gender x success/failure interaction revealed significant gender success/failure effects for subjects from each country  $F(3, 635) = 9.69, p < .01$ . Scheffe' a posteriori comparisons indicated that Indian males' attributions for social failures were significantly less internal ( $p < .05$ ) than were females for both successes and failures. Both Japanese males and females believed they were more responsible for their social failures than successes ( $p < .05$ ). Females, however, believed they were more responsible for both

their successes and failures than did males ( $p < .05$ ). The only significant difference for South Africans was a stronger belief by females in more personal responsibility for their successes than failures ( $p < .05$ ). Among Americans, both genders were more internal for success than were females for failure ( $p < .01$ ). In addition, females were more internal for success than males were for failure ( $p < .05$ ).

#### Attributional Predictors of Gender

To further substantiate the differences in attributional patterns for men and women and to statistically control for the interdependence among attributions, step-wise, multiple regression analyses were performed on gender with the 16 subscales of both the achievement and affiliation domains as predictors. These subscales were the following: Success to Ability, Success to Effort, Success to Task, Success to Luck, Failure to Ability, Failure to Effort, Failure to Task, Failure to Luck, for each of Achievement and Affiliation. To further ascertain differences in these patterns across the represented countries, each country was analyzed separately.

Results indicated that attributions predicted gender in three of the five countries: India, USA, and Japan. However, both the number and the pattern of significant attributions for predicting gender differ across these countries. See Table 3 for an illustration of the order in which each attribution was stepped into the regression equation for each country and for the pattern of significant attributions.

For India, it was found that achievement success to task ( $\beta = -.43$ ) and achievement failure to effort ( $\beta = .23$ ) discriminate between genders (Multiple  $R = .52$ ;  $F = 12.40$ ;  $df = 2, 66$ ). Thus, males in India were more

likely than females to attribute success in achievement to task, and less likely to attribute failure in achievement to effort. There was no difference between males and females on the remaining attributions.

For the United States, it was found that the only significant discriminator between genders was attributing achievement success to luck (Multiple  $R = .19$ ;  $F = 4.52$ ,  $df = 1, 116$ ). Thus females in the United States were more apt than males to attribute success in achievement to luck.

For Japan, it was found that affiliation success to effort ( $\beta = .18$ ), achievement failure to luck ( $\beta = -.23$ ), and achievement success to luck ( $\beta = .17$ ) significantly discriminate between genders (Multiple  $R = .32$ ;  $F = 9.16$ ;  $df = 3, 244$ ). Thus, similarly to females in the United States, females in Japan were more likely to attribute success in achievement to luck. Furthermore, males in Japan were more likely to attribute failure in achievement to luck. In addition, females were more likely to attribute success in affiliation to effort.

Classification analyses to compare predicted group membership (predicted gender) with actual group membership (actual gender) showed that the proportion of correctly classified cases based on the functions derived from the subscales of the MMCS was above chance for all countries. According to the classification results, the discrimination was the most successful for India, with 85.51% of the cases correctly classified. The second most successful classification was with the United States with 72.03% of the cases correctly classified. In descending order by proportion of successful classifications, the next countries were Japan (64.92%), South Africa (64.23%), and finally Yugoslavia (62.11%). The classification results supported the findings of the regression analyses that the best discriminations and most accurate predictions and classifications based on the subscales of the MMCS were for India, the United States, and Japan,

## DISCUSSION

While there were significant differences between males and females across all five countries for achievement attributions to task and for the internal/external dimension, the differences for attributions to ability, effort, and luck, as well as for the stable/unstable dimension, were not significant. Consistent with previous findings (Parsons & Schneider, 1974), even these significant differences were small in magnitude. While there were some significant differences between the genders for individual countries, particularly for Indian subjects, there were many more similarities than differences. Still, the differences do call into question the assertion of McGinnies, et al. (1974) of a transsocietal belief by females in greater external control. In fact, females in the present study were slightly, although significantly, more internal than males. The fact that the differences reported here and in the Parsons and Schneider (1974) study were generally small leads one to question the meaningfulness of these differences, except perhaps in selected instances.

Gender differences appear to be stronger in the affiliation than in the achievement domain. In comparison with gender differences in the achievement sphere, one can see an interesting trend. Earlier studies (Crandall, et al., 1965; Dweck & Reppucci, 1973) predicted that women would attribute achievement success to luck and failure to lack of ability. But more recent research (Bar Tal & Frieze, 1977) has found a general pattern of externality, especially luck attributions for both success and failure. If one examined only the early research on gender differences in social orientation/affiliation that favored women as being more socially oriented and nurturant, these findings could be interpreted within that stereotypic

framework. But since the recent research is inconclusive (either no differences or complex differences), a more parsimonious interpretation is in order (Frieze, et al., 1978). Part of this difference could be attributed to the changing role of the woman. Still, the stereotype of women being more socially adept, e.g. more field dependent (Witkin, Moore, Goodenough, & Cox, 1977), may be more salient and pervasive than even the recent research data can overcome.

Although there was some partial support for the hypotheses, cross-national/culture comparisons are limited to the extent that concepts of attribution applicable in the achievement and affiliation domains exist in a manner similar to the American frame of reference. According to Maehr's (1980) recent cross-cultural work, the definition of achievement itself may differ widely from culture to culture. One advantage of using university students is that the concepts may be more germane to their concerns. By the same token they may represent a privileged groups not reflective of typical individuals in their respective countries.

Table 1

Mean Attributions for Males and Females for Affiliation

Attribution	Males	Females	p<
Ability	9.57	10.06	.02
Effort	9.76	10.18	.05
Task	9.83	9.66	NS
Luck	7.99	7.69	NS
Internality	1.51	2.89	.001
Stability	1.65	1.86	NS



Table 2

Means for Internal Attributions for  
Country X Gender and Country X Gender Success/  
Failure Interactions for Affiliation

Country	Success		Failure		Total	
	Male	Female	Male	Female	Male	Female
India	2.93	4.20	-.23	4.44	1.35	4.32
Japan	-1.03	.95	.74	2.67	-.14	1.81
S. Africa	1.83	3.40	2.04	.95	1.94	2.18
USA	4.50	5.10	2.46	.90	3.48	3.00
Yugoslavia	1.24	2.87	.61	3.41	.92	3.14
Total	1.89	3.30	1.12	2.48	1.51	2.89

Note: Negative numbers indicate external attribution composite scores.

Table 3

Order of Significance and Validity Coefficients (in parentheses) of Each Subscale in Predicting Gender in Separate Step-wise Multiple Regression Analyses for Each Country<sup>a</sup>

Subscale	Order of Significance				
	India (n=69)	S. Africa (n=123)	USA (n=118)	Yugoslavia (n=95)	Japan (n=248)
Ach. Success Ability					
Ach. Success Effort					
Ach. Success Task	1 (r=-.47)				
Ach. Success Luck			1 (r=.19)		3 (r=.12)
Ach. Failure Ability					
Ach. Failure Effort	2 (r=.30)				
Ach. Failure Task					
Ach. Failure Luck					2 (r=-.19)
Aff. Success Ability					
Aff. Success Effort					1 (r=.20)
Aff. Success Task					
Aff. Success Luck					
Aff. Failure Ability					
Aff. Failure Effort					
Aff. Failure Task					
Aff. Failure Luck					
Multiple R	.52		.19		.32

<sup>a</sup>Coding: 1 = male; 2 = female

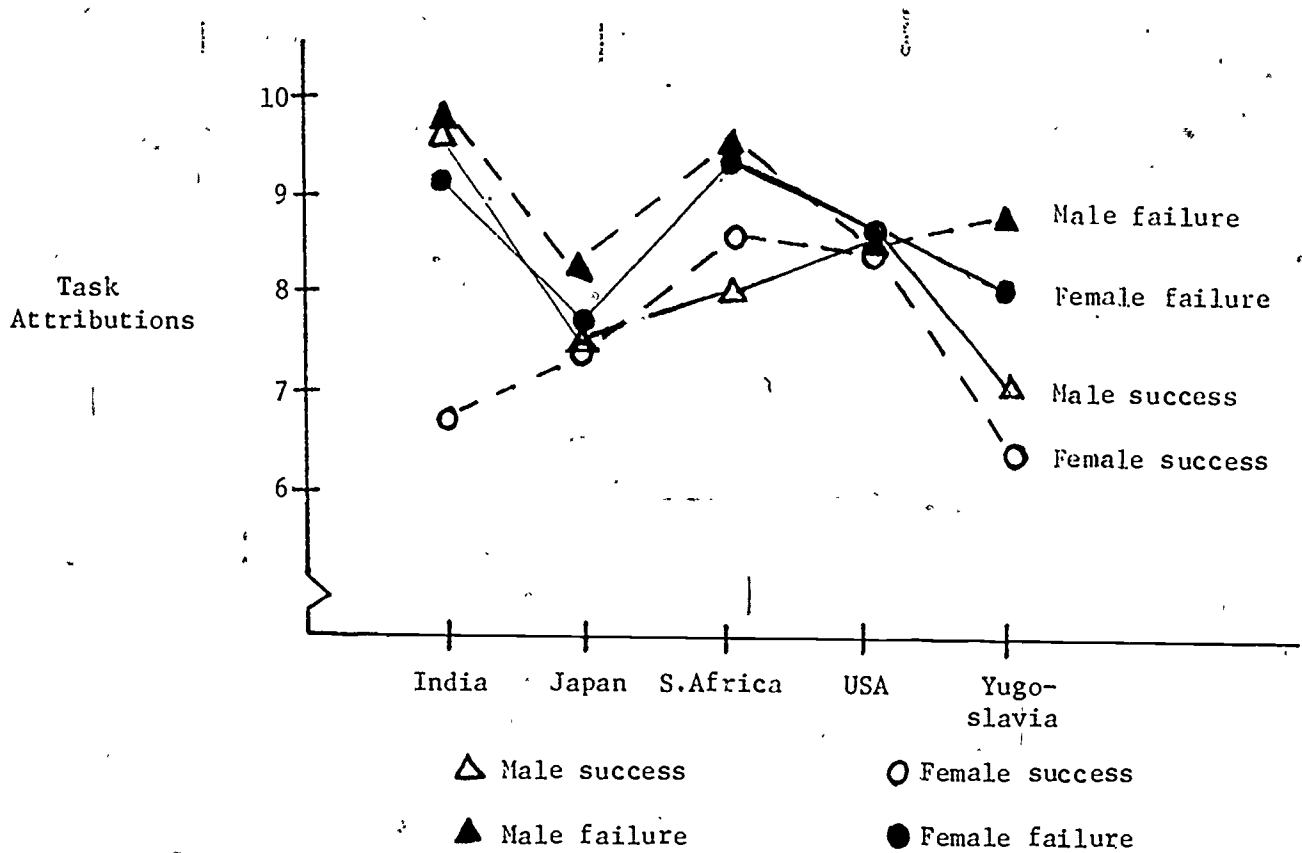


Figure 1. Country X gender X success/failure interaction for task attributions for achievement.

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