This article presents the development and validation of a cross-cultural gender role attitudes test and cultural and regional comparisons using it. Construed within the role distribution theory, the 10-item Gender Role Egalitarian Attitudes Test measures gender attitudes along two domains of work and domestic roles and is free from prescribed gender ideology. Validated in convenience samples of 115 Hong Kong and 124 Floridian college students, the test was shown to have sound psychometric properties. Cultural and regional comparisons were conducted in four additional samples of college students from Beijing, Hong Kong, Florida, and Michigan. Each sample contained 50 male and 50 female students. Among the cross-cultural findings, Chinese were less egalitarian than Americans in work but not in domestic gender attitudes, for which Chinese women were more egalitarian than their American counterparts in Florida. Role distribution theory and recent work on hierarchical cultural collectivism are discussed.

GENDER ROLE EGALITARIAN ATTITUDES IN BEIJING, HONG KONG, FLORIDA, AND MICHIGAN

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This article contains two separate studies. Study 1 reports the cross-cultural development and validation of a gender role attitudes test. In Study 2, this test was used to explore hypotheses regarding cultural and regional differences in gender role attitudes across Beijing, Hong Kong, Florida, and Michigan.

STUDY 1

Psychosocial processes of the East often have been studied through a Western looking glass (Yang & Bond, 1990). The common procedure is to select a Western, often North American, instrument and translate it into the

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language of an Eastern culture in which it is used as an import instrument. One problem with this approach is that some constructs or items that were indigenously developed in the culture of origin may not have cross-cultural counterparts (e.g., Yang & Bond, 1990). Another problem, which is often underestimated, is the difficulty in balancing between faithfulness and meaningfulness in translation, especially when a cross-cultural ideology is embedded in a culture-specific context. Despite these problems, exporting Western measures remains virtually the only method in comparing gender role attitudes between the East and West, partly because there is no instrument that has been developed with both cultures in mind. The present study presents a 10-item scale, the Gender Role Egalitarian Attitudes Test (GREAT), the development of which was indigenous to Chinese and Americans. The test is presented in Table 1.

The principal motivation for developing the GREAT was to fill the void of a cross-culturally indigenous test in this area. In addition, efforts also were made to make the new test complementary to existing gender role attitudes scales in the Western literature. It was hoped that the new measurement would, thus, also provide utility in the Western gender role research. To this end, some common features of the existing gender role attitudes tests were identified. The new test was designed to complement and, whenever possible, improve these features.

DIFFERENCES FROM EXISTING SCALES

The commonly used North American instruments of gender role attitudes include the Attitudes Towards Women Scale (AWS) (Spence & Helmreich, 1972, 1978), the Sex-Role Ideology Scale (SRIS) (Kalin & Tilby, 1978), and the Sex-Role Egalitarianism Scale (SRES) (Beere, King, Beere, & King, 1984; King, Beere, King, & Beere, 1981). A common feature of these and other gender role attitudes scales is that the items are attached with prescribed gender ideologies (Glick & Fiske, 1997). Examples of typical items include, "Women can handle job pressures as well as men can" (SRES), "A woman should have exactly the same freedom of action as a man" (SRI), and "Economic and social freedom is worth far more to women than acceptance of the ideal of femininity, which has been set up by men" (AWS). Such items sensitize respondents to gender egalitarianism of which they may not be fully aware without reading the items. The imbedded ideology also increases the likelihood of a response set of social desirability or political correctness. The AWS, for example, has been criticized for being susceptible to social desirability influence (Jean & Reynolds, 1984; Larsen & Long, 1988). In both cases, the imbedded ideology would provoke more egalitarian responses.

TABLE 1
Items in English, Factor Loadings, and Alpha Reliability Estimates

		Chinese	*American*
Work domain			
		♋ = .71	♋ = .72
	Be a leader	.75	.75
	Have a successful career	.69	.58
	Conduct business	.67	.76
	Receive highest education possible	.56	.59
	Make money	.55	.68
Home domain			
		♋ = .74	♋ = .87
	Take care of children	.74	.81
	Do laundry	.69	.87
	Do housework	.63	.88
	Cook at home	.61	.65
	Shop for groceries	.57	.81

NOTE: Each item was accompanied by the following scale:

1	2	3	4	More for men
0				Same
1	2	3	4	More for women

Respondents were given the following instructions: If you think it is more important or more appropriate for men than it is for women, please use 1, 2, 3, or 4 next to "more for men" to indicate the degree to which you think it is more important or more appropriate for men than it is for women. If you think it is equally important or appropriate for men and women, please check zero. If you think it is more important or more appropriate for women than it is for men, please use 1, 2, 3, or 4 next to "more for women" to indicate the degree to which you think it is more important or more appropriate for women than it is for men.

Although, to different degrees, attitude measures subscribe to a certain kind of sentiment or ideology, the egalitarian ideology in the existing gender role attitudes items can be made less explicit by changing the format of the instrument. Instead of having the ideology statements in every item, the items in the new test contain only the domestic and work roles or activities that, by themselves, are neutral in gender ideology. Respondents are asked to rate their perceptions of the appropriateness of each of the activities for one sex as compared to the other sex. The gender egalitarian ideology is further neutralized by allowing respondents to rate along both directions of the egalitarian continuum. Specifically, respondents are given the choice to express the degree to which they believe a particular social role is more appropriate for either one of the two sexes or it is equally appropriate for both sexes. This

scaling method does not cue respondents to a particular gender role ideology. It also solves another technical limitation of the existing instruments, namely, forced unidirectionality.

Existing scales allow answers only along one direction of the gender equilibrium. Taking an item from the AWS, for example, "In general, the father should have greater authority than the mother in the bringing up of children." An answer of 1 = *strongly disagree* to this item, for example, could mean one of two things: Either both parents should have equal authority, or the mother should have more authority than the father. Although the latter response is expected to be less likely than the former, it is possible, especially in cross-cultural situations in which responses from the comparison cultures may differ from expectations. The way this item is rated and quantified does not distinguish between the two kinds of responses. When the same quantification could potentially represent two different kinds of attitudes, the score has neither reliability nor validity. A great number of the items in the existing scales are framed in a likely manner that does not anticipate responses from the other end of the gender equilibrium.

Another feature of the existing scales is that they seem to have aimed at being comprehensive rather than parsimonious. For example, the SRES was developed with the intention that the construct of interest was first formally defined as fully as possible (King & King, 1997). Their efforts resulted in 95 items covering five domains of adult life in marriage, parenting, employment, interpersonal and heterosexual relations, and education. Although comprehensive, there are certainly more domains in adults' lives that cannot be covered by one test. Parsimony is an equally plausible and also more tangible criterion for instrument development. The AWS, which has 55 items, is similarly lengthy. The authors of both tests, however, subsequently developed shorter versions (King & King, 1990; Spence & Helmreich, 1978). In fact, most researchers using the AWS in recent years adopted the short version (Spence & Hahn, 1997). The short versions have been reported to have equally sound psychometric properties as the long versions (e.g., King & King, 1997; Spence & Hahn, 1997). Thus, a short test that can do almost the same job as a long test would be preferred.

Finally, most of the existing tests were developed about 20 years ago. Social changes since the test development have made certain items inadequate in differentiating current gender role attitudes (Bailey, 1993; Beere, 1990; Fassinger, 1994). For example, two items from the most widely used AWS, both in the short and long version, are the following: "It is insulting to women to have the 'obey' clause still in the marriage service" and "It is ridiculous for a woman to run a locomotive and for a man to darn socks." Such

items are not only out of date but also irrelevant in many cross-cultural situations. Thus, a new, short, and cross-culturally valid test of gender role attitudes would be a useful addition to the cross-cultural as well as the Western gender research literature.

DEFINING THE TEST CONSTRUCT

The construct dimensionality of the GREAT was defined as parsimoniously as possible. Two domains of gender roles were selected to define the construct dimensionality. They were home- and work-related roles and activities. These domains were derived from the role distribution theory (Eagly, 1983, 1987; Eagly & Mladinic, 1989; Eagly & Steffen, 1984). According to this theory, gender stereotypes reflect perceivers' observations of what men and women do in daily life (Eagly & Steffen, 1984). Because what men and women do are mostly determined by their social roles, attitudes toward men and women should reflect the distribution of these two sexes into social roles in society. The major difference in the role distribution of the two sexes is that men are more likely to be assigned work-related roles, whereas women are more likely to be assigned domestic roles (Eagly, 1987; Eagly & Steffen, 1984). This role differentiation underlies the differential endorsement of primarily agentic personalities to men (e.g., assertive) and predominantly communal attributes to women (e.g., nurturant). Reciprocally, the differential endorsement of personality traits leads to the biased gender role attitudes that see women more suited to the seemingly undemanding domestic roles and men more suited to the more competitive work-related roles. Within the framework of the role distribution theory, gender role attitudes can be assessed, along the two social role dimensions, by the degree to which each set of roles is equally or differentially endorsed for men and women. This two-dimension construct accounts for the probable observation that, for example, a gender egalitarian working person may believe that men and women are equal in assuming work-related roles but hold a "traditional" or gender inegalitarian view toward domestic chores at home.

Another reason that the work and home domains were chosen to define the construct dimensionality of the new gender role attitude test was because the traditional gender line demarcation between these two domains is almost pancultural (Williams & Best, 1982). Other domains (e.g., heterosexual relations and religious activities) may lack relevancy in some cultures (Gibbons, Hamby, & Dennis, 1997) or encompass variations according to cultural or individual difference factors other than gender attitude.

METHOD

An initial pool of 30 items, in both English and Chinese, was developed to replicate the two construct dimensions. These items were reviewed by one American and one Chinese psychology professor and several Chinese graduate students studying in the United States. Items receiving consensus endorsement from these judges were retained. Other items were eliminated or revised. The revision resulted in a final pool of 25 items.

These 25 items, together with 3 filler items measuring acquiescence or overall positive opinion, were administered to a convenience sample of 115 (63 female) undergraduate students from a university in Hong Kong. The sample was homogeneous in age (M = 20.92, SD = 1.87). Most of the ages ranged between 18 and 22, although the oldest was 31. These students were also given 10 items from a 12-item modified version of the AWS (Galambos, Petersen, Richards, & Gitelson, 1985). Two dating items from this scale were not used. These students were also given 10 masculinity and 10 femininity items taken from the Bem Sex Role Inventory (BSRI) (Bem, 1974).

The 25 items also were administered to another convenience sample of 124 (74 female) American undergraduate students taken from a university in Florida. The age (M = 27.75) for this sample was more variable with SD = 9.88. These students were given the 10 AWS items as in the Chinese sample. In addition, they were presented with a scenario describing a married couple with a child having achieved high economic and social status. The students were asked to judge each of the couple's education and income level.

Four criteria were used in the subsequent item analyses. Specifically, satisfactory items were expected to have (a) high loadings on respective factors, (b) low correlations with filler items, (c) high correlations with the gender stereotyping scenario in the American sample and with the BSRI items in the Chinese sample, and (d) similar correlations across the two samples with the AWS items. Because many items performed well in one sample but somewhat poorly in the other sample, 15 items were eliminated. The final version of the GREAT has 10 items, with 5 measuring domestic and 5 measuring work-related gender role attitudes.

RESULTS

Principal component factor analysis (Varimax rotation) on these 10 items yielded two independent factors in both samples in alignment with the domestic and work roles. The two-factor structure was supported by the often

used "eigenvalue greater than 1" rule. In the American sample, the eigenvalues corresponding to the two factors were 4.18 and 1.72, accounting for 59% of the variance. In the Chinese sample, the eigenvalues were 3.65 and 1.35, accounting for 50% of the variance explained. In both samples, the next largest eigenvalue was greatly reduced in magnitude. Similarly, the scree test indicated a sharp shift in the curving of variance explained corresponding to the two factors. The factor analysis results were highly similar across the Chinese and American samples. The coefficient of factor congruence that measures similarity of factor patterns between two independent samples was .97 and .98 for the work- and domestic-role factors, respectively. Table 1 contains the test items and their factor loadings from the principal component factor analysis, as well as internal consistency reliability estimates for each of the two factor scores.

The items were scaled between –4 and 4 on a 9-point scale. A zero on this scale represents a gender egalitarian attitude. A positive number indicates the degree to which one holds gender-stereotypical attitudes. A negative value represents an antistereotypical attitude, for example, believing that it is more appropriate for men than for women to do housework. Two composite scores, home and work, were computed by averaging the five domestic and five work role items, respectively. Table 2 contains the means and standard deviations of these two composite scores.

These two composite scores showed moderate correlations with the estimated education and income levels in the gender role-stereotyping scenario in the American sample. The work score was significantly correlated with the estimate of the wife's salary, $r = –.37$. That is, a work-related gender-stereotypical attitude was associated with a lower salary estimate for the female partner. The home variable was significantly correlated ($r = .33$) with the difference between the couple's education levels (subtracting the wife's years of education from the husband's). It indicated that persons holding more egalitarian attitudes toward domestic roles presumed a smaller difference between the couple's years of education.

In the Chinese sample, these two variables were highly correlated with the two composite scores consisting of the 10 masculinity and 10 femininity BSRI items. The home variable had a correlation of .47 with the femininity score. The work variable had a correlation of .60 with the masculinity score. The same BSRI items were subsequently administered to another American sample (to be reported in Study 2), and similar correlations were obtained. The domestic-femininity and work-masculinity correlations were .47 and .58, respectively.

The correlations with the AWS scale were statistically significant and similar in magnitude across the two samples. The AWS scale correlated with

TABLE 2
Means and Standard Deviations of the Home and Work Scales

	Home		*Work*		
	M	SD	M	SD	N
Chinese	0.80	0.87	0.99	1.06	115
Female	0.49	0.75	0.60	0.93	63
Male	1.18	0.86	1.46	1.02	52
American	1.13	1.41	0.45	1.23	124
Female	1.09	1.44	0.24	1.32	76
Male	1.20	1.37	0.78	0.99	48

the home variable at .41 and .35 in the Chinese and American samples, respectively. Its correlations with the work variable were .37 and .32 in these two samples. These correlations were not statistically different across the two samples.

DISCUSSION

These findings provided validity evidence for the use of the new test. For example, the consistency of the AWS correlations across the two samples was supportive of the cross-cultural validity of the use of the test. The cross-cultural consistency of the AWS correlations was considered more important than the magnitude of the correlations. During the item analysis, items showing higher but less consistent correlations with the AWS items across the American and Chinese samples were eliminated. Such items would likely contain cultural bias deemed unfit for cross-cultural studies.

More important, the home and work scores were highly correlated with the two BSRI measures in the Chinese and another American sample. These correlations supported the role distribution theory that the agency-communion trait distinction emerges from the associations of men with power and high-status work roles and women with nurturance and low-status domestic roles (Eagly, 1987). The test, which was construed within the role distribution theory, was accorded construct validity to the degree that it bore out the association, as defined by the theory, between the domestic-work role differentiation and its corresponding communion-agency trait distinction. The similarity among the BSRI correlations across the two samples provided additional evidence of cross-cultural validity.

In addition, the moderate correlations with the gender stereotype scenario in the American sample provided some evidence of predictive validity. The correlations were moderate partly because the criterion measure lacked adequacy. For example, it was somewhat farfetched to estimate the income and education levels from a conjured scenario. Further research is needed to determine if, in a more realistic situation, this gender role attitudes test can better predict gender egalitarian decisions and behaviors. Construct validation is an ongoing process of which the present study represents an initial step. With the initial validity evidence, the test is believed to have promising cross-cultural applications. The domestic-work gender role differentiation is almost cross cultural (Williams & Best, 1982). Thus, even though the development of the test was based on two specific cultures, its use can be more easily extended to other cultures than can many existing tests. In addition, the brevity of the items and the absence of ideological sentiment will facilitate language translation should other cross-cultural uses of the test arise. However, brevity, as one of the strengths of the test, also represents a limitation. That is, this test does not cover many roles and activities that may be of interest to gender researchers, particularly in single-culture studies.

STUDY 2

This study examines cultural and regional differences in gender role attitudes among Chinese from Beijing and Hong Kong and Americans from Florida and Michigan.

CULTURAL DIFFERENCES

In *Culture's Consequences*, Hofstede (1980) identified four dimensions along which national cultures differ. The four factors of cultural differences were extracted from a factor analysis of 40 country mean scores of work value items completed by employees of IBM subsidiaries in the 1970s. One of the four factors, which accounted for the second most of the variance, was referred to as the masculinity-femininity dimension. Masculinity underlies a more distinct social role differentiation along the gender line, whereas femininity represents more overlapping in gender role distributions. Hofstede's masculinity-femininity factor can be seen as a cultural conception of Eagly's (e.g., 1987) role distribution theory, which differentiates gender roles at the individual level. The United States was categorized as a masculinity society, although it scored only slightly above the mean on masculinity-femininity (Hofstede, 1980). However, in a recent study, the United States scored among

the lowest on masculinity and was thus categorized as a more gender egalitarian society (Fernandez, Carlson, Stepina, & Nicholson, 1997). In this study, China, which was not included in Hofstede's (1980) IBM study, was categorized as one of the highest masculinity countries.

Americans and Chinese also seem to hold different gender role attitudes. In another influential cross-cultural study, Williams and Best (1990) administered the Kalin SRIS measure (Kalin & Tilby, 1978) to 50 male and 50 female students in 14 countries. Among the countries, the Netherlands was most egalitarian and Nigeria was least egalitarian in gender role attitudes. The United States and Canada were in the middle next to (more egalitarian than) Singapore and Malaysia. Gender role attitudes of China and Hong Kong, which were not included in this study, should most closely resemble those of Singapore and Malaysia by both geographical proximity and cultural composition. From these findings, it was hypothesized that, for both sexes, Americans would be moderately more egalitarian in both work and domestic gender role attitudes than Chinese from Beijing and Hong Kong.

REGIONAL COMPARISONS

However, were Americans from Florida and Michigan equally egalitarian? Were Chinese from Hong Kong and Beijing equally less egalitarian than the Americans? Data collected for this study would allow the exploration of such questions. The South-North difference in the United States seems well documented. In general, Southerners lag behind their northern counterparts in egalitarian gender views (e.g., Twenge, 1997). For example, in different time cohorts, Spence and Helmreich's Texas samples of college students scored consistently more traditional on the AWS than did college students from the northern states (Lunneborg, 1974; Muehlenhard & Miller, 1988; Twenge, 1997). The General Social Survey data (GSS), from 1972 and 1982 (Hurlbert, 1988) to 1993 (Rice & Coates, 1995), showed that Southerners were less supportive of women participating in politics and less favorable about married women seeking employment. Existing studies have focused on the overall gender views or work-related gender attitudes but have not specifically examined attitudes toward domestic roles. Because most of the existing data were collected in the 1970s or 1980s, one purpose of the present study was to determine whether the South-North difference pattern has changed in any way in the late 1990s. Based on existing findings, it was hypothesized that the Midwesterners would be more egalitarian than their Floridian counterparts in both the work- and home-related gender role attitudes.

The extent of agreement between the Chinese from Beijing and Hong Kong is far less clear. From the cultural and political characteristics of Beijing and Hong Kong, two counterhypotheses could be proposed. A cultural similarity hypothesis would presume little difference in gender role attitudes between Beijing and Hong Kong Chinese. The common root of a long-lasting Chinese culture is unlikely to be eradicated by changes in the contemporary social system. A social difference hypothesis, on the other hand, would suggest differences in gender role attitudes between these two regions, although the direction of the differences would remain unclear. If one believes that the Western modernization has contributed to the gradual acceptance of more egalitarian gender roles, Hong Kong Chinese who have experienced the Western modernization under the British rule should hold more egalitarian gender role attitudes than their compatriots in Beijing. It also may be argued that Hong Kong Chinese have been exposed to the same Western gender equality concept brought about by the women's movement in the West. In China, however, the gender equality concept is by no means nonexistent. As one of the Marxist principles, China's gender equality development took a top-down route in which the government enforces the equality ideology and practice as a state policy. This policy, which swept the nation beginning in 1949, reached its extremes during the Cultural Revolution, which is now referred to as a desexed time (Zheng, 1997). The question becomes whether the different gender equality ideologies in the two regions have the same or different impact in forming gender role attitudes. To complicate the question, however, in the past decade, people in China increasingly have been exposed to the influence of Western cultures. Similarly, Hong Kong has, in recent years, been under increased influence from China. Thus, it was difficult to predict but interesting to explore the difference or lack of it in gender role attitudes between Hong Kong and Beijing.

METHOD

SAMPLES

Participants were from four convenience samples of college students from Hong Kong, Beijing, Michigan, and Florida. The Hong Kong sample consisted of 75 female and 68 male undergraduate students drawn from a university in Hong Kong. Their ages ranged from 18 to 25 (M = 20.08, SD = 1.29).

The Beijing sample consisted of undergraduate students as well as participants in a training program conducted in a university in Beijing. The age

ranged more widely from 17 to 59 (M = 27.65, SD = 8.22). The sample was evenly divided by sex with 50 from each.

The Michigan sample also had a wide age range from 17 to 49 (M = 24.44, SD = 5.5). The 50 female and 53 male undergraduate students in the sample were taken from a state university.

There were 50 female and 51 male undergraduate students in the Florida sample. Age ranged from 17 to 47 (M = 20.20, SD = 4.2). The sample was taken from a state university in Florida.

ADDITIONAL VALIDITY EVIDENCE

The 10-item GREAT was administered in these samples. In the Florida sample, 10 masculinity and 10 femininity items from the BSRI (Bem, 1974) also were administered. Principal component factor analysis supported the two-factor structure of the GREAT in all four samples. By either the "eigenvalue greater than 1 rule" or the scree test, there were two distinct factors corresponding to the five work and five domestic role items. The two factors accounted for close to or slightly more than 60% of the variance in the four samples. On average, factor loadings were at .70. Table 3 reports internal consistency reliability estimates and average factor loadings obtained from the four samples.

ANALYSIS

Because the sample size for most of the samples was 50 or slightly higher, to achieve a balanced design, some cases were randomly dropped to obtain an equal sample size of 50 for all samples. The largest case reduction occurred in the Hong Kong sample, in which 25 female and 16 male cases were randomly excluded. For the female sample, the means and standard deviations based on the full sample versus the reduced sample, for the home variable, were M = .55 versus .51, SD = .80 versus .78. For the work variable, M = .80 versus .80, SD = .72 versus .73. For the male group, they were M = 1.30 versus 1.37, SD = 1.13 versus 1.13 for the home variable; and M = 1.54 versus 1.58, SD = 1.19 versus 1.22 for the work variable. There was no reduction in the Beijing sample that started with 50 male and 50 female participants. Three male cases were randomly deleted from the Florida sample. There was almost no change in means and standard deviations associated with the case deletion.

Planned comparisons were conducted to make the two hypothesized comparisons, namely, American (Michigan and Florida) versus Chinese (Hong Kong and Beijing) and Florida versus Michigan. These two comparisons

TABLE 3
Reliability Estimates (α) and Average Factor Loadings (AFL)

	Work		*Home*	
	α	*AFL*	*α*	*AFL*
Beijing	.75	.69	.71	.64
Hong Kong	.83	.74	.81	.71
Florida	.80	.72	.70	.69
Michigan	.83	.76	.81	.75

were orthogonal. Also employed was a country by gender (4 × 2) factorial ANOVA of balanced design, which was followed by Tukey's HSD post hoc test to explore mean differences between Hong Kong and Beijing and other pairwise comparisons.

RESULTS

Table 4 contains means and standard deviations from the four samples. Because the standard deviations were highly identical across the four samples, raw scores were used instead of standardized scores, which were recommended by one of the reviewers as a means to adjust for response sets.

The first hypothesis—that Americans were more egalitarian than Chinese—was not supported for the home variable. The mean difference between these two groups was almost zero. Within each sex, the difference was also nearly nonexistent. American men were slightly more egalitarian than Chinese men ($|\bar{d}| = .27$), whereas Chinese women were slightly more egalitarian than American women ($|\bar{d}| = .26$). These differences were within the expected range of sampling fluctuation.

The hypothesis was supported for the work variable. The mean difference, subtracting American mean from Chinese mean, was .98, $t(196) = 6.25$, $p < .001$. The difference was almost identical across the two sexes. The mean differences between Americans and Chinese were .95 for women and 1.01 for men. Thus, for both men and women, Americans were more egalitarian than Chinese in their work-related gender views.

A closer look at the data also indicates that Americans were far more gender egalitarian in their work attitudes than they were in their domestic attitudes. The mean of the work variable was .39, or less than half a standard deviation from zero, which represented gender equality. The mean of the

TABLE 4
Means and Standard Deviations of the Four Comparison Samples

	Home		*Work*	
	M	SD	M	SD
Hong Kong	0.94	1.06	1.19	1.08
Female	0.51	0.78	0.80	0.73
Male	1.38	1.13	1.58	1.23
Beijing	1.01	0.98	1.57	1.10
Female	0.73	0.86	1.16	1.15
Male	1.28	1.03	1.98	0.87
Michigan	0.63	0.99	0.30	1.10
Female	0.52	0.96	–0.09	1.08
Male	0.74	1.01	0.70	0.99
Florida	1.31	1.04	0.49	1.09
Female	1.25	0.97	0.15	0.87
Male	1.37	1.10	0.83	1.19

home variable was .97, which was about one standard deviation from equality. The Chinese, on the other hand, were more egalitarian at home ($M = 0.97$, about one standard deviation from equality) than they were at work ($M = 1.35$, close to one and one half standard deviations from equality).

Post hoc comparisons revealed two additional findings of cross-cultural interest. One interesting finding was that Chinese women were more egalitarian than women from Florida were regarding domestic roles, but the reverse was true concerning work roles. Another finding of interest was the seemingly differential gender difference across the two cultures. American women were more egalitarian than men were in relation to work-related roles, whereas the two sexes held almost identical views regarding domestic roles. In the Chinese sample, on the other hand, gender difference was equally pronounced in both areas, with women being more egalitarian. These and other results discussed earlier are depicted in Figure 1.

The second hypothesis concerning regional difference within the United States was supported in the home variable. With the mean difference being .69, $t(196) = 3.37$, $p < .001$, the Midwesterners were more egalitarian than the Floridians in their attitudes toward domestic roles. This regional difference was of similar magnitude in men ($|\bar{d}| = .63$) and women ($|\bar{d}| = .73$). This regional hypothesis, however, was not supported in the work variable, $t(196) = .86$, $p > .05$. Floridians held more traditional gender views regarding home- but not work-related roles. Finally, concerning the regional comparison

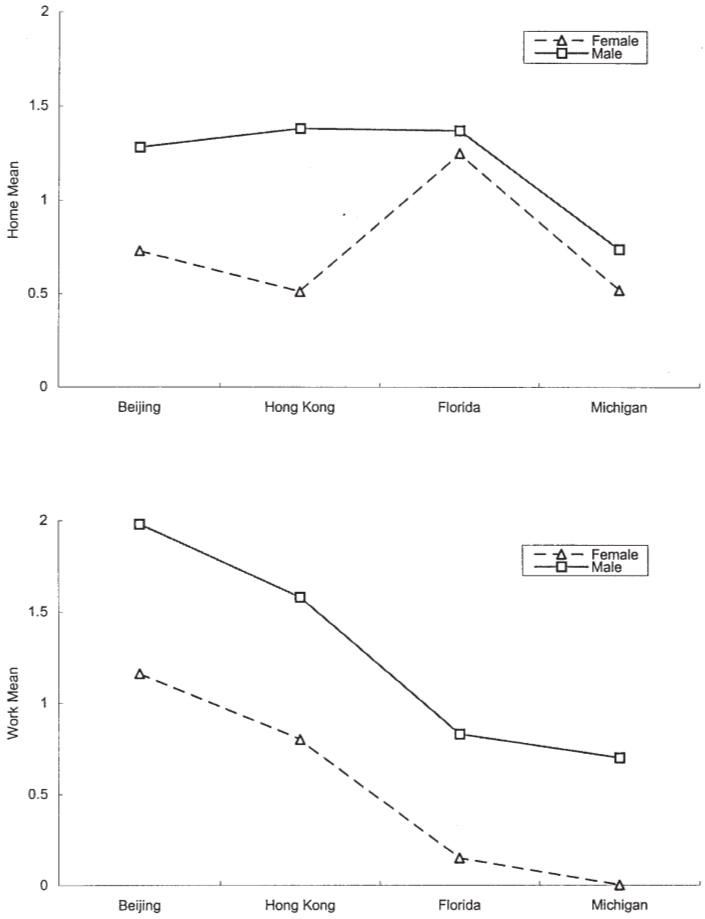

Figure 1: Means of Home- and Work-Related Gender Role Attitudes
NOTE: Zero indicates gender egalitarianism.

between Hong Kong and Beijing, Tukey's HSD showed no significant difference in either the work or home variable, although, in both cases, Beijing had slightly higher means, or were less egalitarian, than Hong Kong.

DISCUSSION

Chinese were less egalitarian than Americans in their work-related gender attitudes. This finding supports Hofstede's (1980) observation that high-masculinity cultures are associated with low percentages of women holding professional and technical employment. China scored among the highest on the masculinity measure (Fernandez et al., 1997). Women seeking higher education and professional posts in China or Hong Kong, in comparison with the United States, represent a more recent social phenomenon for a combination of cultural and economical reasons. According to the role distribution theory, gender views are formed and reinforced based on observations of what men and women do in everyday life (Eagly & Steffen, 1984). From this perspective, with the infusion of an increasing female professional work force in this region (Zheng, 1997), work-related gender role egalitarianism is expected to improve among the Chinese.

Regarding domestic gender roles, however, Chinese and Americans were no different overall, and Chinese women were more egalitarian than their American counterparts in Florida. A look at the two domains of gender roles together (see Figure 1) shows that Americans were far more egalitarian at work than they were at home, whereas the pattern was reversed for the Chinese, who were more gender egalitarian at home than they were at work. In addition, there was no gender difference in the American sample, not because men came closer to women's more egalitarian views but because women shared the more traditional views with men. From these findings, one may speculate that, compared with the Americans, Chinese women would have higher expectations of men assuming domestic roles, and, holding work-related gender views constant, Chinese men could be more willing to assume these roles. The findings may even suggest that, in contrast to a sexist work environment, Chinese women would derive more satisfaction from the greater gender egalitarianism they experience in their family lives.

Recently, Triandis (1995) proposed the distinction between a horizontal or relationship-oriented versus a vertical or authority-oriented cultural collectivism. (Also see Chen, Meindl, & Hunt, 1997.) The work environment is likely to activate the vertical/authority collectivism in which cultural collectivists (e.g., Chinese) are primarily concerned with conforming to social or organizational norms. The horizontal/relationship collectivism is likely to be enacted at home or in other private settings in which the collectivists are concerned with the well-being and a harmonious relationship of the in-group members. These two kinds of collectivism would prompt different gender role attitudes demarcated between the work and home domains. The cultural

individualists (e.g., Americans), on the other hand, are less concerned with a collectivity, whether the latter is construed as an authority or as in-group membership. The differential gender role attitudes expressed by the Americans may indicate the fact that a gender equality ideology transcends public lives more than private lives in a society that traditionally differentiates roles along the gender line.

The last point also explains the finding that the Floridians were less egalitarian than the midwestern Americans in home- but not work-related gender attitudes. Apparently, social changes affect public lives more than private lives, in which cultural tradition is more resilient. Southerners have been found to lag behind the Northerners in their overall gender views (e.g., Twenge, 1997). Previous research also has indicated the improvement of the gender equality concept over time (see Twenge, 1997, for a review), including that found in the South. For example, responses to the short-version AWS from four southern college student cohorts of 1972, 1976, 1980, and 1992 showed the time-graded decline in the endorsement of traditional gender attitudes (Helmreich, Spence, & Gibson, 1982). The present finding points out further that gender equality improvement in the public or work arena precedes that in the private and family life and that Floridians have caught on with their northern compatriots in work-related gender attitudes. This finding is important because previous studies have not looked at gender attitudes toward domestic roles separately and also because existing data on overall gender attitude change (e.g., Helmreich et al., 1982) are no longer current. The present finding sheds new light on the regional as well as time change in gender role attitudes in the United States.

Reasons for the finding of no difference between the Hong Kong and Beijing Chinese are difficult to pinpoint. Either the different political ideologies of gender equality in the two regions have rendered the same effect in forming gender role attitudes or, if different, the common Chinese cultural root has resisted either effect. Alternatively, the recent loosening of government control and the increasing Western influence in China could have resulted in attitudinal changes that have made the two regions more similar today than they were presumed to be. Although the explanations are inconclusive, the finding itself is interesting and important in that previous research has not specifically compared work and domestic gender role attitudes between these two regions. One way to better untangle the cultural versus political influence on gender role attitudes is to conduct age-graded cohort comparisons to see if attitude changes have undergone the same or different development in these two places that share the same cultural heritage but a different political ideology.

GENERAL CONCLUSION

One objective of this article was to present the 10-item GREAT. Construed within Eagly's (1987) role distribution theory, GREAT measures gender attitudes on two domains of work and domestic roles. GREAT is intended to be general, short, cross cultural, and free from prescribed gender ideology. These features complement existing gender role attitude scales that tend to be comprehensive, long, culture specific, and imbedded in gender egalitarian sentiment. As presented in Study 1, the initial validation evidence is satisfactory. More psychometric work is needed to further validate the use of GREAT, particularly in different cross-cultural settings.

Cross-cultural comparisons using GREAT revealed some interesting findings. Toward domestic roles, for example, Chinese were equally gender egalitarian as Americans, and Chinese women were more egalitarian than Floridian women were. Such findings may appear counterintuitive because they contradict the widely held belief that Asians, both men and women, are more sexist than Westerners. These and other findings could reflect a more rapid gender role attitude change in Asia in conjunction with the region's rapid economic development. They could even suggest a slowing down in the feminist movement and the associated ideological shift in the United States (Twenge, 1997). On the other hand, however, findings from this study suggest the need to reexamine, within a specific region and culture on a specific social domain, whether Asians are indeed more sexist than Westerners. Are all the Asians (e.g., Chinese, Japanese, Koreans, Indians, Filipinos, and Thai) equally sexist as are all Americans, for example, equally more gender egalitarian? Could a relation-oriented collectivism (Chen et al., 1997) or familism (Yang, 1981) serve as a buffer that alleviates sexism in Chinese families? Could Asians have previously appeared more sexist than they truly are due to the lack of culturally indigenous instruments? Although the present study, like all correlational research, cannot fully answer these questions, raising the questions is a good start toward a better understanding of gender role attitudes across cultures. Further research is needed to make specific cultural and regional comparisons and, better yet, to examine possible causes of the observed cultural differences.

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