COMPARATIVE STUDY OF INTERNATIONAL IMAGES OF AMERICAN AND KOREAN ADOLESCENTS

International image studies have their roots in studies of stereotyping and prejudice. Stereotyping as a concept was introduced by Lippmann (1922) in his work on public opinion. According to Lippmann, stereotypes are like "pictures in our heads" we construct to simplify matters in a world too complex to be known or experienced directly. In this context we are concerned with the pictures in people's heads as referring to their own country or other countries. Kelly's (1955) notion of "personal construct" is very similar to Lipmann's concept of stereotype with reference to social groups. Kelly suggested that we perceive people and events through personal constructs, a template imposed upon reality and throuogh which reality is perceived. His theory of personal constructs implies that perceptions of people and events are shaped by one's cognitive structure as well as the actual characteristics of people and events (Jones and Ashmore 1975). Kelly believed that personal constructs could be inferred from the ways in which people or events were seen as being alike or different.

This early development of cognitive orientation in studying stereotypes and images was thwarted by the popular checklist method developed by Katz and Braly in 1933. Subjects of their study were asked to choose from a given list the adjectives which ones best described various national groups. Results showed a high degree of consensus

among subjects on the traits assigned to national groups. Numerous studies have since investigated the stereotypes of one national group toward others and/or self-stereotypes. In terms of the scope of study and the methods employed, few studies went beyond the Katz and Braly paradigm. Studies carried out by Vinacke (1949), Cantril (1953), Jahoda(1959), and Chandra (1967) all followed the Katz and Braly paradigm.

As Harding and his colleagues (1969, p.7) put it, the adjective checklist procedure "has completely dominated the field since its introduction." Several reasons have contributed to the popularity of checklist method (Hamilton, 1981): Ease of administration and scoring, applicability to many different nations, and the seemingly neutral nature of the list.

Brigham (1971) criticized the checklist method saying that this technique leads to a cataloguing of the stereotypes of various subject samples regarding social groups, but the resulting catalogue is not an adequate operationalization of stereotypes. Furthermore, he argued that respondents who choose from the give checklist are forced to behave in more stereotyped ways than they would normally behave.

The main purpose of this paper is to present a way to investigate the international images from the cognitive perspective. Conceived within the framework of cognitive theories, the concept of "maps" which represent reality but are not themselves reality is the best analogy available for the study of international images. A study of international images endeavors to expose for examination the maps or

pictures of the nations of the world as conceived by the citizens of different countries of the world. Chase (1948) provides an elaboration of this analogy: "Inside each of us lies a picture of the world. It stands for the whole realm of material objects, happenings, relationships, out there.... It is our map of reality, without which we could not find our way through life at all" (quoted by Buchanan and Cantril, 1953).

To draw an accurate map, it is necessary to be able to estimate the distance among the objects that are to be included in the map. A complex international image demands a complex attribute structure to represent it appropriately. The early usage of "maps" in image studies was basically figurative in that the distances between attributes (either names of nations or characteristics of nations) were not measured directly.

A number of studies have recently investigated the structural aspects of international images. Typically, the respondents were requested to make a judgment of how different two national groups are from one another on a scale from 1 (very similar) to 9 (very different), and these data were analyzed with some form of non-metric multidimensional scaling (MDS) such as INDSCAL (Wish, 1970; Funk, Horowitz, Lipshitz, & Young, 1976; Sherman, 1973; Forgas & O'Driscoll, 1984). Another method utilized is sorting (Jones & Ashmore, 1975) in which the data is analyzed by factor analysis or smallest space analysis (Robinson & Hefner, 1967). The main

purpose of such studies was to determine the underlying dimensions rather to construct an actual configuration (map) of the nations or their attributes included in the study. The most most commonly detected dimensions have been communism-noncommunism, economic development, western/nonwestern culture, and geography. These studies have contributed to our understanding of cognitive structure and they are an important advancement from the early checklist type of study. These studies, however, could not succeed in the task of accurately portraying the cognitive maps that people have about other countries mainly because of the ordinal nature of their measurement. The similarities and differences of each pair of objects were measured from 1 to 9 and the maps that emerged from this type of data could only reveal the relative position of each nation, not the actual distances a perceived by the various groups.

The other main purpose of this paper is to portray accurately such cognitive maps by employing a metric multidimensional scaling (MMDS) method. Barnett (1980) demonstrated the utility of metric multidimensional scaling in his study of national identity vis-a-vis the effects of television. Yum(1984) examined the international images held by college students in three countries using the metric multidimensional scaling method known as Galileo(TM) (Woelfel and Fink, 1980).

Once the cognitive map is accurately drawn, it is meaningful to study the semantic characteristics of the dimensions in order to discover which personal constructs

people use to organize their perceptions of different nations. The third purpose of this study was to compare the cognitive maps held by groups from two different countries in terms of their semantic evaluation of each nation.

Several researchers have explored the factors that affect the structure of cognitive maps. Wish (1970) found that political orientation and sex of the respondent and the development level of one's country affect what dimension is more important for judging the similarities and differences among nations. Sherman (1973) found that attitudes toward war and anticipated social interaction were important factors. Robinson and Hefner (1967) found that the general public and the academic community are different in their perceptions of nations. For the public sample, the major factor for the perceptual space was communism and for academic sample, it was democratic development.

In this study, the question of whether or not cultural differences create different cognitive maps of nations was explored. At first glance, the cultural differences of cognitive maps may seem obvious, but, on the other hand, scholars have also proposed the emergence of a global village and the homogenization of world culture due to the high level of international communication and exposure.

In this study, two different cultural groups were included: the United States and Korea. The United States and Korea are different in the major factors that have been found to be significant in determining international perceptions,

such as level of economic development, culture, geographical distance, and size of the population.

The present study is limited to the perceptions of the adolescents of the two cultures included rather than of adults. Investigations of adolescent perceptions of international images are scarce except for a few early studies (Heindel, 1937; Lambert & Klineberg, 1967). Adolescents were chosen rather than adults as a matter of convenience (i.e., classroom administration), but the investigations of adolescent images should contribute to our understanding of adults as well. Also, it provides a foundation for the future study of the developmental process of cognitive structure with respect to international images.

According Piaget (1952), a child passes through three stages: (1) a sensori-motor stage (birth-2 years) where fundamental invariants such as permanence are formed; (2) a stage of concrete reasoning (2-12 years), and (3) a stage of abstract reasoning (12 years and up). It is at the third stage that the child is capable of hypothetico-deductive resoning and propositional logic. Children in the third stage of development were selected for study since the subject matter requires hypothetical and abstract reasoning. Goodman (1952) and Vaughan (1964) have detected prejudice and stereotypical behaviors in very oung children and found that these attitudes increase in intensity until late adolescence, when they become fully developed and stabilized.

RESEARCH DESIGN AND METHODOLOGY

Sample selection

From March to September, 1985, a survey was conducted to investigate the international images and communication patterns of adelescents in two different countries: the U.S.A and Korea. The American sample consisted of 268 school children in the seventh and eighth grades of 3 American middle schools. One was a large, suburban public middle school and the other two were small, private schools (Catholic and Jewish). Of the 268 respondents, 130 were male and 131 female, and 7 did not indicate. The mean age was 13.5 years. The Korean sample consisted of 189 school children in the seventh and eighth grade levels of one large, suburban middle school in Seoul, Korea. Of the 189 respondents, 92 were male and 97 female. The mean age was 13.7 years. In terms of age and sex, the two groups were quite comparable, though neither could be considered representative of all of the children of that age in their respective country.

For all samples a self-administered survey was conducted during a social studies class period. No time limit was imposed and the respondents were given the entire period to complete the questionnaire.

Measurement

The measurement of the cognitive map of each cultural group was accomplished by means of a questionnaire using the method of complete pair comparisons and direct magnitude estimation of the differences between nations (Woelfel &

Fink, 1980). The psychological configuration of each cultural group is represented by the average matrix S, where any entry s(i,j) is the arithematic mean conception of the distance between objects i and j as seen by all members of lthe group (Woelfel, 1972). Each vector of the matrix represents the definition of a concept in terms of its relationship to all other concepts. The concept of "Yourself" was included among the set of nations. So, the aggregate self-concept of the group was defined by the row and column of the matrix which represents the measured relationship of the average self to all of the other concepts (nations) in the set. This method may be applied to compare a several different cultures. The differnce between two cultures S(1) and S(2) at any one point in time is simply the degree of discrepancy S(1)-S(2).

While these matrices provide accurate representation of a cultural system's cognitive map, they are not in convenient mathematical form. By calculating the eigenvalues and eigenvectors of the centroid scalar products of these matrices, the points representing beliefs may be projected onto the axes of a multidimensional Riemann space (Woelfel & Fink,1980; Kincaid, et al.,1983). This process is mathematically equivalent to converting a matrix of distances among cities into a graphic representation, such as a map. In the special case of cities an N x N table can be described with no loss of information in a three-dimensional Euclidian space. In the case of a cognitive map, the spatial

manifold is usually of higher dimensionality, and often several of the eigenvectors will be imaginary indicating that the spaces are general Riemann spaces rather than Euclidian (Woelfel & Fink, 1980).

In this study, respondents were asked to complete a Galileo(TM) complete paired-comparison instrument (Gillham and Woelfel, 1977; Woelfel et al.,1980), which asked them to estimate the differences among the following eleven nations and one's self-concept:

1. United States
2. Russia
3. Japan
4. Brazil
5. Mexico
6. Israel
7. Nicaragua
8. France
9. China
10. Korea
11. Nigeria
12. Yourself

These countries were selected to represent the major super-powers as well as some of the emerging developing nations which are different from each other in terms of their social, political, geographic and economic characteristics.

The 12 concepts required 66 paired-comparison judgments per respondent, according to the following instuctions: "If the United States and France are 100 points apart, how different are ___ and ___?". The respondents were instructed to keep this standard measure in mind as a guide for making the direct magnitude (ratio) estimates of the distances among the 12 concepts.

In addition to direct magnitude estimates of similarity,

respondents were also asked to rate the 11 countries on 5 bipolar scales, which were to be used for the interpretation of the resulting cognitive maps. The five bipolar scales were rich-poor, democracy-dictatorship, militaristic-peace loving, strong-weak, and bad-good. These five adjectives pairs were selected to represent Osgood's three main dimensions (i.e., affective, evaluative, and action) of the semantic differential scale. Two dimensions found to be the main dimensions in previous studies of nations (economic development and political ideology) were tapped by the rich-poor and the democracy-dictatorship scales.

The questionnaire was pretested with 8 children of the seventh and eighth grades to check the comprehensibility of terms and instructions used in the questionnaire and to estimate the completion time. A few minor changes were made in the final version of the questionnaire as a result. The Korean sample used translated, Korean-language questionnaires.

RESULTS

The matrices of the mean judgements of the two samples are presented in Table 1 and Table 2. In both samples, the distance between Russia and Yourself was the largest while the distance between one's own country and oneself was the smallest. It is noteworthy that children from Korea perceived a shorter distance between the themselves and the United States and between Korea and the United States than did their American counterparts. American adolescents

perceived a greater distance between themselves and Korea and the United States and Korea. Also, Korean children perceived a shorter distance between the U.S.A. and Russia than the American children. Korean children perceive the two super powers closer to one another than do American students.

The grand mean of all 66 pairs of the American sample was somewhat smaller than the Korean sample (251.39 and 269.51 respectively), suggesting that Korean children have a somewhat larger cognitive map than the American children.The size of the cognitive map was also measured by sum of the roots (trace of the space) with results similar to the grand means (371,401 for Americans compared to 439,237 for Koreans).

To examine the differences in the configuration of the maps, each of the multidimensional space of each culture was compared to one another by means of a computer routine for rigid-body rotation using a least-square criterion. The results reveal the differences remaining between the twelve concepts of one space and the other after the rotation has transformed away spurious differences in the orientations of the two reference frames (Woelfel & Fink,1980). Table 3 represents the differences between the locations of the nations in one cognitive map and the other map.

(Table 3 about here)

The difference between the relative position of Korea in each map is the largest discrepancy in the set (202.45), followed by Mexico, Nicaragua, and Russia. The smallest

discrepancies between the two maps were for France and Israel.

To test the relationship between the evaluative attitudes and the cognitive map, respondents were asked to judge each nation on the five bi-polar adjectives. Table 4 reports the mean scores of each nation as evaluated by the American and Korean children.

(Table 4 about here)

The American children rated Nicaragua the most negatively followed by Nigeria and Russia. Korean children rated Russia the most negatively followed by China and Nicaragua. It is noteworthy that Korean children rated the U.S.A the highest, even higher than Korea itself and higher than the American children rated their own country the U.S.A. The American children, however, did rate their own country the highest, followed by France and Japan. Korean children made more extreme judgements (8.29 to 3.89) than American children (7.18 to 3.77).

The dimensionality of two cognitive maps was very similar. For the American sample, the first dimension accounts for 44 percent of the variance in the perceived distance among the countries, the second dimension, 22 percent, and the third dimension 11 percent. For the Korean sample, the first dimension accounts for 51 percent of variance, the second dimension accounts for 26 percent, and the third dimension, 14 percent.

The plot of the first two dimensions of each map superimposed upon one another is shown in Figure 1. This map reflects 66 percent of the variance in the distances perceived by the American children and 77 percent of the variance of the distance perceived by the Korean children. That this map is not merely a reflection of the geographical distance among these countries is indicated by its comparison to the plot of the actual latitude and longitude of the capital cities of each country shown in Figure 2.

To interprete and explain the characteristics of the dimensions of the cognitive maps, the first three dimensions were correlated with the five bipolar scales and geographic location of each nation (longitude and lattitude of the capital of each nation). Table 5 shows the results of the analysis of the American sample and Table 6 reports the results of the Korean sample.

(Table 5 and 6 about here)

For the American sample, the democracy-dictatorship scale was the most highly correlated with the first dimension (r=.95), accounting for 91 percent of its variance. For the Korean sample, the democracy-dictatorship scale was also highly correlated with the first dimension, but not as highly as for the American sample. Also, for Americans democracy-dictatorship is highly correlated with the good-bad scale (r=.97) while for Koreans democracy-dictatorship was highly correlated with both good-bad (r=.94) and militaristic-peace loving. (r=.98). Consequently, the first dimension

could be interpreted a a political system dimension.

For the American sample, the second dimension was best explained by the east-west geographical distance (longitude). This geographical distance explained 71 percent of the variance in the sencod dimension. For Koreans, the strong-weak scale best explained the second dimension (64 percent of variance explained).

None of the bipolar scales nor the geographical distances explained any significant portion of the third dimension. This dimension seems to differentiate Nigeria, an African nation, from the rest of the nations included in the study.

DISCUSSION

The most noticeable finding of the study is the similarity rather than the difference between the two international images of American and Korean children. Korean children have a larger cognitive map than American children, but in terms of dimensional structure, two samples were very similar, and the dimensions could be interpreted by similar attributes. This result is consistent with previous studies which demonstrated that poeple from widely differing cultures have stable and consistent cognitive representations about other nations (Forgas & O'Driscoll, 1984).

The first dimension, which accounted for almost half of the variance of the maps of both samples was considered to be a political system dimension. This finding is also consistent with previous research which found political alignment to be

one of the most important dimensions along with economic development. The finding that adolescents' cognitive maps are similar to that of adults is a significant finding. By the age of 12 to 14, international images are structurally well formulated.

The distance that Korean children perceive between themselves and the United States was much smaller than the distance the American children perceived between themselves and Korea. Korean children rated the United States extremely high, much higher than their own country overall. These findings suggest that a reference-group effect may be responsible. Reference group theory hypothesizes the influence on attitudes (including one's self-concept) of non-membership groups--groups to which people refer, admire and sometimes overestimate (Salazar, 1983).

There are a few other noteworthy differences. Korean children perceived themselves farther from Russia and Nicaragua than did American children. This may be due to the fact that Korea is divided into two countries and children are constantly reminded of the contrast between democratic and communist countries. China, however, was not perceived as distant as Russia or Nicaragua. Historically, Korea has long had a close affinity and friendly relation with China. Therefore, recent ideological differences may not have had as much of a negative impact on the perception of China as on Russia. Other studies have also found that people tend to differentiate the European communist countries from Asian

communist countries (Forgas & O'Driscoll, 1984).

The difference between the relative position of Korea in the two cognitive maps after rotation was almost three times as large as that of difference between the relative location of the U.S.A. This means that Korean children and American children have quite different images of Korea in relation to other countries while both groups perceived the position of the United States vis-a-vis other countries in a similar fashion.

This finding is accentuated by comparing the geographical location of Korea (Figure 2) with the cognitive maps of Americans and Koreans (Figure 1). In the former, Korea is clearly located close to China and Japan. The cognitive map of the American children also shows these three East Asian counties as a tight cluster. The Korean children, however, perceive their own country as much closer to the U.S.A. and France than to China and Japan. What is the source of this discrepancy? Would a similar pattern emerge for children from other countries (Israel, for example) regarding the perception of their own country in the world? Data collection planned for other countries in the future should reveal whether or not this is a common pattern.

The positions of Israel and France were very similar in both cognitive maps. This could be explained by the fact that: (1) both Israel and France are geographically far and culturally different from both Korea and the United States, and (2) both Israel and France are perceived very positively by both groups.

The present paper has made several contributions to the study of international images. It has demonstrated the utility of metric multidimensional scaling constructing accurate cognitive maps and comparing two different cultural groups. We were able to map the actual distances and shapes of these cognitive maps as well as to interpret their dimensionality using conventional scales. By augmenting the study with semantic differential scales and actual geographical distances, we were able to interpret the dimensions empirically and determine that both cultural groups use consistent dimensions to form their international images. The study found that the cognitive maps of 12-14 year-old children are similar to that of adults, lending support to the idea that by the early teens, the cognitive maps of other nations are already well structured.

REFERENCES

Barnett, G. & McPhail, T. (1980). "An examination of the relationship of United States Television and Canadian identity," International Journal of Intercultural Relations, 4, 219-232.

Brigham, J. (1971). "Ethnic stereotypes," Psychological Bulletin, 76, 15-38.

Chandra, S. (1967). "Stereotypes of university students toward different ethnic groups," Journal of Social Psychology, 1967, 71, 87-94.

Chase, S. (1939). The Proper Study of Mankind. New York: Harcourt, Brace & Co.

Forgas, J. & O'Driscoll, M. (1984). "Cross-cultural and demographic differences in the perception of nations," Journal of Cross-Cultural Psychology, 15, 199-222.

Funk, S., Horowitz, A., Lipshiz, R., & Young, F. (1976). "The perceived structure of American ethnic groups: The use of multidimensional scaling in stereotype research," Sociometry, 39, 116-130.

Gilham, J. & Woelfel, J. (1977). "The Galileo system: preliminary evidence for precision, stability, and equivalence to traditional measures," Human Communication Research, 3, 222-234.

Goodman, M. (1952). Race Awareness in Young Children. Revised ed. New York: Collier.

Hamilton, D. (1981). Cognitive processes in stereotyping and intergroup behavior. Hillsdale, N.Y.: Lawrence Erlbaum Associates.

Harding, J. et al. (1969). "Prejudice and ethnic relations," in G. Lindzed & E. Aronson (Eds.), Handbook of Social Psychology (Vol. 5) (2nd ed.). Reading, Mass: Addison-Wesley.

Heindel, R. (1937). "American Attitude of British Schoolchildren," School and Society, 46, 838-840.

Jahoda, G. (1959). "Nationality preferences and national stereotypes in Ghana before independence," Journal of Social Psychology, 50, 165-174.

Jones, R. & Ashmore, R. (1973). "The structure of intergroup perception," Journal of Personality and Social Psychology, 25, 428-438.

Katz, D. & Braly, K. (1933). "Racial stereotypes of one hundred college students," Journal of Abnormal and Social Psychology, 28, 281-290.

Kelly, G. (1955). The Psychology of Personal Constructs. New York: Norton.

Kincaid, L., et al. (1983). "The cultural convergence of Korean immigrants in Hawaii: An empirical test of a mathematical theory," Quality and Quantity, 18, 59-78.

Lambert, W. and Klineberg, O. (1967). Children's Views of Foreign People. New York: Appleton-Century-Crofts.

Lippmann, W. (1922). Public Opinion, New York: Harcourt Brace.

Pioget, J. (1952). The Origins of Intelligence in the Child. New York: International University Press.

Robinson, J. & Hefner, R. (1967). "Multidimensional differences in public and academic perceptions of nations," Journal of Personality and Social Psychology, 7, 251-259.

Salazar, J. (1983). "Degree of development and distance as related to mutual perception and attitudes among students in seven American countries," in Deregoski, J., Dziurawiec, S., & Annis, R. (Eds.), Expiscations in Cross-Cultural Psychology, Swets and Zeitlinger B.V., Lisse.

Sherman, R. (1973). "Dimensional salience in the perception of nations as a function of attitudes toward war and anticipated social interaction," Journal of Personality and Social Psychology, 27, 65-73.

Vaughan, G.M. (1964). "The development of ethnic attitudes in New Zealand school children," Genetic Psychology Monographs, 70, 135.

Vinacke, W. (1949). "Stereotyping among national-racial groups in Hawaii: A study in ethnocentrism," Journal of Social Psychology, 30, 265-291.

Wish, M. (1970). "Differences in conceptual structure of nations: An exploratory study," Journal of Personality and Social Psychology, 16, 361-373.

Woelfel, J. (1972). "Procedures for the precise measurement of cultural processes," University of Illinois, unpublished manuscript.

Woelfel, J. & Fink, E. (1980). "The Measurement of Communication Processes: Galileo Theory and Method. New York: Academic Press.

Woelfel, J., et al. (1980). How to Do a Galileo Study. Albany, N.Y.: Good Books.

Yum, J. (1984). "International Images and international communication experiences," paper presented at the International Communication Association, San Francisco, May.

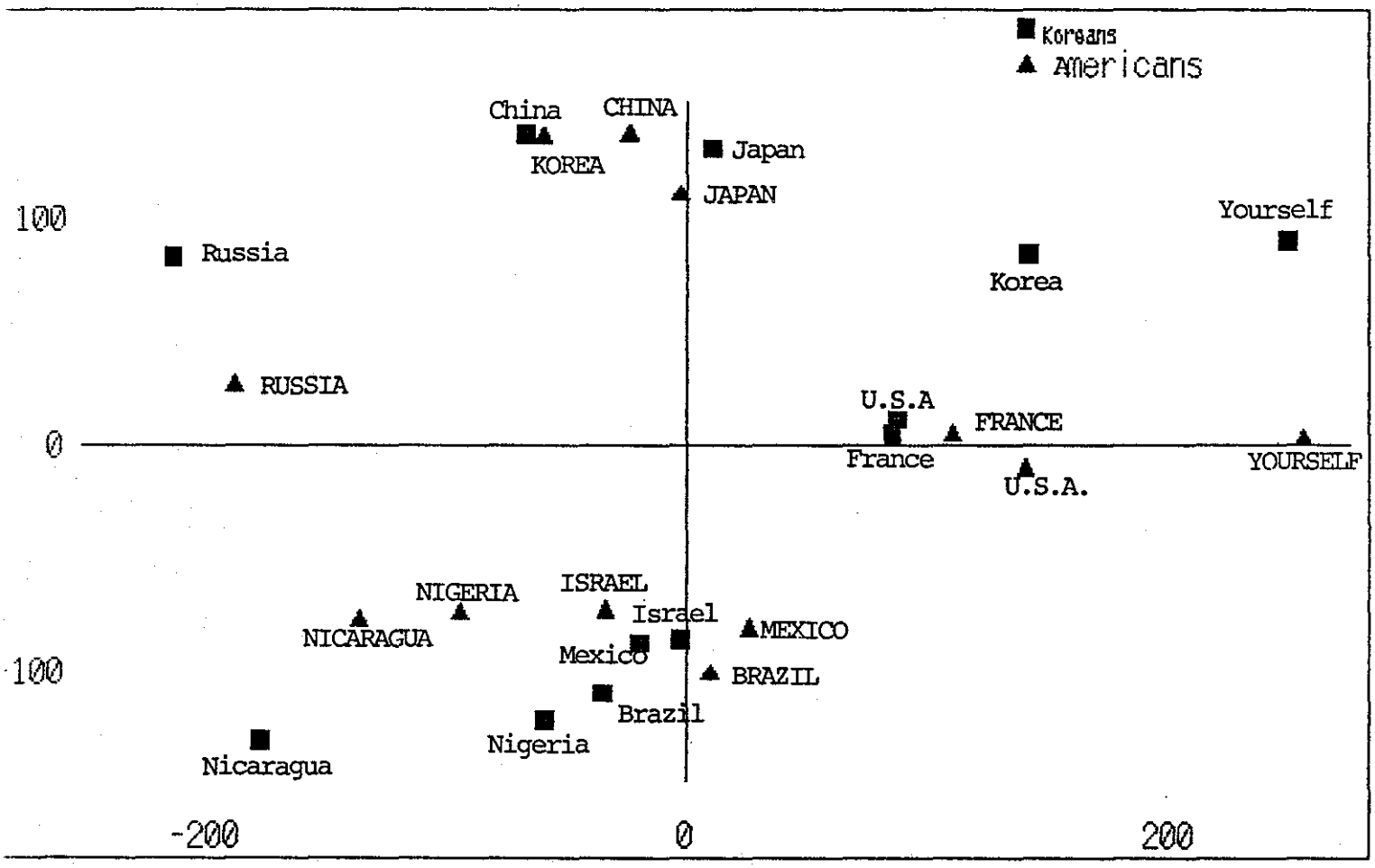

Figure 1. Comparison of American & Korean International Images in Two Dimensions

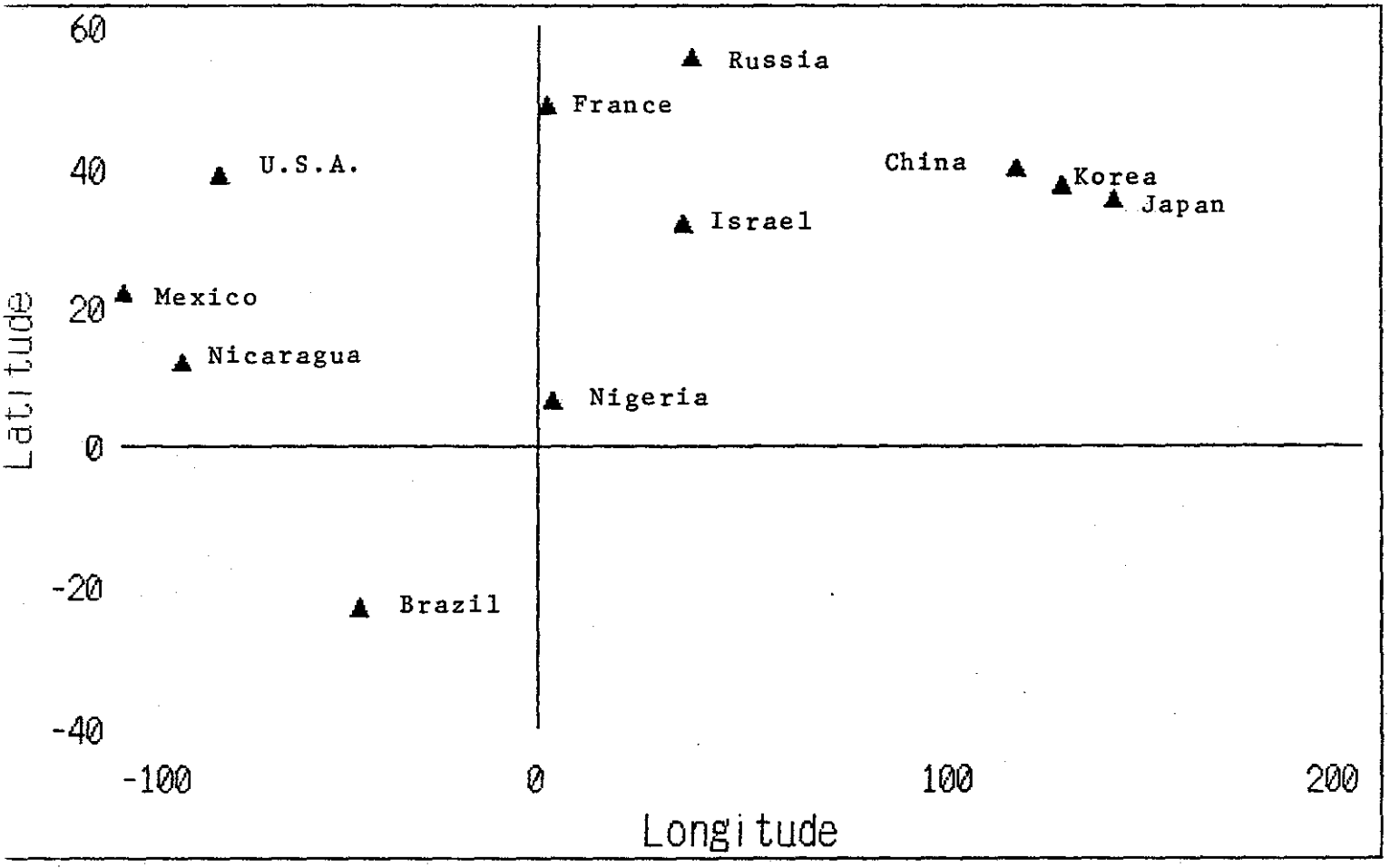

Figure 2. Two Dimensional Map of the Capital Cities of each Country by Actual Latitude and Longitude

Table 1. The Means Matrix of Paired Comparison: U.S.A.

	U.S.A.	Russia	Japan	Brazil	Mexico	Israel	Nicaragua	France	China	Korea	Nigeria	Yourself
U.S.A.												
Russia	338											
Japan	210	221										
Brazil	219	261	237									
Mexico	160	273	240	144								
Israel	242	251	255	246	239							
Nicaragua	285	158	256	227	212	236						
France	111	298	227	221	246	274	309					
China	216	195	141	288	262	283	286	242				
Korea	251	220	116	283	257	278	266	279	170			
Nigeria	269	218	280	253	264	249	246	288	273	297		
Yourself	31	446	271	292	266	328	410	185	313	360	390	

Table 2. The Means Matrix of Paired Comparison: Korea

	U.S.A.	Russia	Japan	Brazil	Mexico	Israel	Nicaragua	France	China	Korea	Nigeria	Yoursel
U.S.A.												
Russia	298											
Japan	157	201										
Brazil	194	317	295									
Mexico	194	299	291	129								
Israel	273	354	283	206	235							
Nicaragua	327	290	301	206	297	285						
France	105	271	180	223	228	267	332					
China	238	151	158	269	230	280	331	307				
Korea	188	407	152	218	271	264	423	196	245			
Nigeria	309	333	306	219	216	271	261	337	319	366		
Yourself	240	535	197	380	387	296	503	224	292	36	361	

Table 3. The Means of Semantic Diffentials

	Poor-Rich		Dictatorship Democracy		Militeristic Peace-Loving		Weak-Strong		Bad-Good	
	USA	Korea	USA	Korea	USA	Korea	USA	Korea	USA	Korea
Russia	5.50	5.55	2.63	1.89	2.70	1.90	7.51	8.35	3.51	1.92
Japan	5.72	7.90	5.56	6.40	5.50	6.14	5.05	7.03	6.15	4.71
Brazil	4.48	4.60	5.33	6.50	5.57	6.62	4.16	4.41	5.74	6.45
Mexico	3.90	4.50	5.25	6.25	5.64	6.43	4.00	4.37	5.63	6.35
Israel	4.41	5.28	5.06	6.61	4.68	6.19	5.01	5.64	5.34	6.43
France	6.54	7.59	6.47	7.86	5.47	7.58	5.65	6.92	6.92	7.48
China	5.24	4.62	4.33	3.17	4.83	3.57	5.63	6.56	5.56	3.98
Korea	3.96	5.36	4.55	7.68	4.98	7.79	4.20	4.80	5.22	7.83
Nigeria	3.78	3.51	4.58	5.68	4.97	6.29	3.96	3.51	5.10	5.98
U.S.A.	8.05	8.76	8.12	8.63	4.49	7.89	8.28	8.66	7.02	7.71
Nicaragua	3.70	3.57	3.72	4.95	3.78	5.40	4.61	3.81	4.11	5.39

Total Mean (5 objectives combined)

	U.S.	Korea
Russia	4.27	3.89
Japan	5.43	6.40
Brazil	4.82	5.65
Mexico	4.78	5.53
Israel	4.77	5.96
France	6.07	7.40
China	5.03	4.29
Korea	4.35	6.66
Nigeria	4.14	4.98
U.S.A.	7.18	8.29
Nicaragua	3.77	4.50

Table 4 . The Differences Between International Images of Korean and American Adolescents in Multi-dimensional Space

U.S.A.	83.77
RUSSIA	84.58
JAPAN	76.41
BRAZIL	67.53
MEXICO	100.97
ISRAEL	39.26
NICARAGUA	89.76
FRANCE	32.98
CHINA	57.14
KOREA	202.45
NIGERIA	63.06

Table 5. The Correlations Among the Three Dimensions, Five Bipolar Scales, and East-West, North-South Measures: American Adolescents

	Dimension 1	Dimension 2	Dimension 3	Rich-Poor	Democracy-Dictatorship	Militaristic-Peace Loving	Strong-Weak	Good-Bad	East-West	North-South
Dimension 1										
Dimension 2	-.00									
Dimension 3	-.02	-.00								
Rich-Poor	.63	.27	.21							
Democracy-Dictatorship	.95	-.08	-.05	.67						
Militaristic-Peace Loving	.65	-.02	.12	-.06	.55					
Strong-Weak	.20	.22	.21	.84	.26	-.56				
Good-Bad	.96	.09	.09	.67	.97	.64	.22			
East-West	-.21	.84	.20	-.00	-.26	.05	-.04	-.09		
North-South	.05	.62	.23	.51	.01	-.37	.61	.07	.43	

Table 6. The Correlations Among the Three Dimensions, Five Bipolar Scales, and East-West, North-South Measures: Korean Adolescents

	Dimension 1	Dimension 1	Dimension 3	Rich-Poor	Democracy-Dictatorship	Militaristic-Peace Loving	Strong-Weak	Good-Bad	East-West	North-South
Dimension 1										
Dimension 2	.07									
Dimension 3	.24	-.03								
Rich-Poor	.57	.49	.46							
Democracy-Dictatorship	.70	-.44	.53	.49						
Militaristic-Peace Loving	.66	-.54	.47	.34	.98					
Strong-Weak	.20	.79	.24	.80	-.07	-.24				
Good-Bad	.64	-.60	.50	.24	.94	.97	-.27			
East-West	.48	.53	-.48	.16	-.20	-.22	.24	-.28		
North-South	.29	.75	.03	.54	-.14	-.25	.73	-.24	.43	

COMPARATIVE STUDY OF INTERNATIONAL IMAGES OF AMERICAN AND KOREAN ADOLESCENTS

International image studies have their roots in studies of stereotyping and prejudice. Stereotyping as a concept was introduced by Lippmann (1922) in his work on public opinion. According to Lippmann, stereotypes are like "pictures in our heads" we construct to simplify matters in a world too complex to be known or experienced directly. In this context we are concerned with the pictures in people's heads as referring to their own country or other countries. Kelly's (1955) notion of "personal construct" is very similar to Lipmann's concept of stereotype with reference to social groups. Kelly suggested that we perceive people and events through personal constructs, a template imposed upon reality and throuogh which reality is perceived. His theory of personal constructs implies that perceptions of people and events are shaped by one's cognitive structure as well as the actual characteristics of people and events (Jones and Ashmore 1975). Kelly believed that personal constructs could be inferred from the ways in which people or events were seen as being alike or different.

This early development of cognitive orientation in studying stereotypes and images was thwarted by the popular checklist method developed by Katz and Braly in 1933. Subjects of their study were asked to choose from a given list the adjectives which ones best described various national groups. Results showed a high degree of consensus

among subjects on the traits assigned to national groups. Numerous studies have since investigated the stereotypes of one national group toward others and/or self-stereotypes. In terms of the scope of study and the methods employed, few studies went beyond the Katz and Braly paradigm. Studies carried out by Vinacke (1949), Cantril (1953), Jahoda(1959), and Chandra (1967) all followed the Katz and Braly paradigm.

As Harding and his colleagues (1969, p.7) put it, the adjective checklist procedure "has completely dominated the field since its introduction." Several reasons have contributed to the popularity of checklist method (Hamilton, 1981): Ease of administration and scoring, applicability to many different nations, and the seemingly neutral nature of the list.

Brigham (1971) criticized the checklist method saying that this technique leads to a cataloguing of the stereotypes of various subject samples regarding social groups, but the resulting catalogue is not an adequate operationalization of stereotypes. Furthermore, he argued that respondents who choose from the give checklist are forced to behave in more stereotyped ways than they would normally behave.

The main purpose of this paper is to present a way to investigate the international images from the cognitive perspective. Conceived within the framework of cognitive theories, the concept of "maps" which represent reality but are not themselves reality is the best analogy available for the study of international images. A study of international images endeavors to expose for examination the maps or

pictures of the nations of the world as conceived by the citizens of different countries of the world. Chase (1948) provides an elaboration of this analogy: "Inside each of us lies a picture of the world. It stands for the whole realm of material objects, happenings, relationships, out there.... It is our map of reality, without which we could not find our way through life at all" (quoted by Buchanan and Cantril, 1953).

To draw an accurate map, it is necessary to be able to estimate the distance among the objects that are to be included in the map. A complex international image demands a complex attribute structure to represent it appropriately. The early usage of "maps" in image studies was basically figurative in that the distances between attributes (either names of nations or characteristics of nations) were not measured directly.

A number of studies have recently investigated the structural aspects of international images. Typically, the respondents were requested to make a judgment of how different two national groups are from one another on a scale from 1 (very similar) to 9 (very different), and these data were analyzed with some form of non-metric multidimensional scaling (MDS) such as INDSCAL (Wish, 1970; Funk, Horowitz, Lipshitz, & Young, 1976; Sherman, 1973; Forgas & O'Driscoll, 1984). Another method utilized is sorting (Jones & Ashmore, 1975) in which the data is analyzed by factor analysis or smallest space analysis (Robinson & Hefner, 1967). The main

purpose of such studies was to determine the underlying dimensions rather to construct an actual configuration (map) of the nations or their attributes included in the study. The most most commonly detected dimensions have been communism-noncommunism, economic development, western/nonwestern culture, and geography. These studies have contributed to our understanding of cognitive structure and they are an important advancement from the early checklist type of study. These studies, however, could not succeed in the task of accurately portraying the cognitive maps that people have about other countries mainly because of the ordinal nature of their measurement. The similarities and differences of each pair of objects were measured from 1 to 9 and the maps that emerged from this type of data could only reveal the relative position of each nation, not the actual distances a perceived by the various groups.

The other main purpose of this paper is to portray accurately such cognitive maps by employing a metric multidimensional scaling (MMDS) method. Barnett (1980) demonstrated the utility of metric multidimensional scaling in his study of national identity vis-a-vis the effects of television. Yum(1984) examined the international images held by college students in three countries using the metric multidimensional scaling method known as Galileo(TM) (Woelfel and Fink, 1980).

Once the cognitive map is accurately drawn, it is meaningful to study the semantic characteristics of the dimensions in order to discover which personal constructs

people use to organize their perceptions of different nations. The third purpose of this study was to compare the cognitive maps held by groups from two different countries in terms of their semantic evaluation of each nation.

Several researchers have explored the factors that affect the structure of cognitive maps. Wish (1970) found that political orientation and sex of the respondent and the development level of one's country affect what dimension is more important for judging the similarities and differences among nations. Sherman (1973) found that attitudes toward war and anticipated social interaction were important factors. Robinson and Hefner (1967) found that the general public and the academic community are different in their perceptions of nations. For the public sample, the major factor for the perceptual space was communism and for academic sample, it was democratic development.

In this study, the question of whether or not cultural differences create different cognitive maps of nations was explored. At first glance, the cultural differences of cognitive maps may seem obvious, but, on the other hand, scholars have also proposed the emergence of a global village and the homogenization of world culture due to the high level of international communication and exposure.

In this study, two different cultural groups were included: the United States and Korea. The United States and Korea are different in the major factors that have been found to be significant in determining international perceptions,

such as level of economic development, culture, geographical distance, and size of the population.

The present study is limited to the perceptions of the adolescents of the two cultures included rather than of adults. Investigations of adolescent perceptions of international images are scarce except for a few early studies (Heindel, 1937; Lambert & Klineberg, 1967). Adolescents were chosen rather than adults as a matter of convenience (i.e., classroom administration), but the investigations of adolescent images should contribute to our understanding of adults as well. Also, it provides a foundation for the future study of the developmental process of cognitive structure with respect to international images.

According Piaget (1952), a child passes through three stages: (1) a sensori-motor stage (birth-2 years) where fundamental invariants such as permanence are formed; (2) a stage of concrete reasoning (2-12 years), and (3) a stage of abstract reasoning (12 years and up). It is at the third stage that the child is capable of hypothetico-deductive resoning and propositional logic. Children in the third stage of development were selected for study since the subject matter requires hypothetical and abstract reasoning. Goodman (1952) and Vaughan (1964) have detected prejudice and stereotypical behaviors in very oung children and found that these attitudes increase in intensity until late adolescence, when they become fully developed and stabilized.

RESEARCH DESIGN AND METHODOLOGY

Sample selection

From March to September, 1985, a survey was conducted to investigate the international images and communication patterns of adelescents in two different countries: the U.S.A and Korea. The American sample consisted of 268 school children in the seventh and eighth grades of 3 American middle schools. One was a large, suburban public middle school and the other two were small, private schools (Catholic and Jewish). Of the 268 respondents, 130 were male and 131 female, and 7 did not indicate. The mean age was 13.5 years. The Korean sample consisted of 189 school children in the seventh and eighth grade levels of one large, suburban middle school in Seoul, Korea. Of the 189 respondents, 92 were male and 97 female. The mean age was 13.7 years. In terms of age and sex, the two groups were quite comparable, though neither could be considered representative of all of the children of that age in their respective country.

For all samples a self-administered survey was conducted during a social studies class period. No time limit was imposed and the respondents were given the entire period to complete the questionnaire.

Measurement

The measurement of the cognitive map of each cultural group was accomplished by means of a questionnaire using the method of complete pair comparisons and direct magnitude estimation of the differences between nations (Woelfel &

Fink, 1980). The psychological configuration of each cultural group is represented by the average matrix S, where any entry s(i,j) is the arithematic mean conception of the distance between objects i and j as seen by all members of lthe group (Woelfel, 1972). Each vector of the matrix represents the definition of a concept in terms of its relationship to all other concepts. The concept of "Yourself" was included among the set of nations. So, the aggregate self-concept of the group was defined by the row and column of the matrix which represents the measured relationship of the average self to all of the other concepts (nations) in the set. This method may be applied to compare a several different cultures. The differnce between two cultures S(1) and S(2) at any one point in time is simply the degree of discrepancy S(1)-S(2).

While these matrices provide accurate representation of a cultural system's cognitive map, they are not in convenient mathematical form. By calculating the eigenvalues and eigenvectors of the centroid scalar products of these matrices, the points representing beliefs may be projected onto the axes of a multidimensional Riemann space (Woelfel & Fink,1980; Kincaid, et al.,1983). This process is mathematically equivalent to converting a matrix of distances among cities into a graphic representation, such as a map. In the special case of cities an N x N table can be described with no loss of information in a three-dimensional Euclidian space. In the case of a cognitive map, the spatial

manifold is usually of higher dimensionality, and often several of the eigenvectors will be imaginary indicating that the spaces are general Riemann spaces rather than Euclidian (Woelfel & Fink, 1980).

In this study, respondents were asked to complete a Galileo(TM) complete paired-comparison instrument (Gillham and Woelfel, 1977; Woelfel et al.,1980), which asked them to estimate the differences among the following eleven nations and one's self-concept:

1. United States
2. Russia
3. Japan
4. Brazil
5. Mexico
6. Israel
7. Nicaragua
8. France
9. China
10. Korea
11. Nigeria
12. Yourself

These countries were selected to represent the major super-powers as well as some of the emerging developing nations which are different from each other in terms of their social, political, geographic and economic characteristics.

The 12 concepts required 66 paired-comparison judgments per respondent, according to the following instuctions: "If the United States and France are 100 points apart, how different are ___ and ___?". The respondents were instructed to keep this standard measure in mind as a guide for making the direct magnitude (ratio) estimates of the distances among the 12 concepts.

In addition to direct magnitude estimates of similarity,

respondents were also asked to rate the 11 countries on 5 bipolar scales, which were to be used for the interpretation of the resulting cognitive maps. The five bipolar scales were rich-poor, democracy-dictatorship, militaristic-peace loving, strong-weak, and bad-good. These five adjectives pairs were selected to represent Osgood's three main dimensions (i.e., affective, evaluative, and action) of the semantic differential scale. Two dimensions found to be the main dimensions in previous studies of nations (economic development and political ideology) were tapped by the rich-poor and the democracy-dictatorship scales.

The questionnaire was pretested with 8 children of the seventh and eighth grades to check the comprehensibility of terms and instructions used in the questionnaire and to estimate the completion time. A few minor changes were made in the final version of the questionnaire as a result. The Korean sample used translated, Korean-language questionnaires.

RESULTS

The matrices of the mean judgements of the two samples are presented in Table 1 and Table 2. In both samples, the distance between Russia and Yourself was the largest while the distance between one's own country and oneself was the smallest. It is noteworthy that children from Korea perceived a shorter distance between the themselves and the United States and between Korea and the United States than did their American counterparts. American adolescents

perceived a greater distance between themselves and Korea and the United States and Korea. Also, Korean children perceived a shorter distance between the U.S.A. and Russia than the American children. Korean children perceive the two super powers closer to one another than do American students.

The grand mean of all 66 pairs of the American sample was somewhat smaller than the Korean sample (251.39 and 269.51 respectively), suggesting that Korean children have a somewhat larger cognitive map than the American children.The size of the cognitive map was also measured by sum of the roots (trace of the space) with results similar to the grand means (371,401 for Americans compared to 439,237 for Koreans).

To examine the differences in the configuration of the maps, each of the multidimensional space of each culture was compared to one another by means of a computer routine for rigid-body rotation using a least-square criterion. The results reveal the differences remaining between the twelve concepts of one space and the other after the rotation has transformed away spurious differences in the orientations of the two reference frames (Woelfel & Fink,1980). Table 3 represents the differences between the locations of the nations in one cognitive map and the other map.

(Table 3 about here)

The difference between the relative position of Korea in each map is the largest discrepancy in the set (202.45), followed by Mexico, Nicaragua, and Russia. The smallest

discrepancies between the two maps were for France and Israel.

To test the relationship between the evaluative attitudes and the cognitive map, respondents were asked to judge each nation on the five bi-polar adjectives. Table 4 reports the mean scores of each nation as evaluated by the American and Korean children.

(Table 4 about here)

The American children rated Nicaragua the most negatively followed by Nigeria and Russia. Korean children rated Russia the most negatively followed by China and Nicaragua. It is noteworthy that Korean children rated the U.S.A the highest, even higher than Korea itself and higher than the American children rated their own country the U.S.A. The American children, however, did rate their own country the highest, followed by France and Japan. Korean children made more extreme judgements (8.29 to 3.89) than American children (7.18 to 3.77).

The dimensionality of two cognitive maps was very similar. For the American sample, the first dimension accounts for 44 percent of the variance in the perceived distance among the countries, the second dimension, 22 percent, and the third dimension 11 percent. For the Korean sample, the first dimension accounts for 51 percent of variance, the second dimension accounts for 26 percent, and the third dimension, 14 percent.

The plot of the first two dimensions of each map superimposed upon one another is shown in Figure 1. This map reflects 66 percent of the variance in the distances perceived by the American children and 77 percent of the variance of the distance perceived by the Korean children. That this map is not merely a reflection of the geographical distance among these countries is indicated by its comparison to the plot of the actual latitude and longitude of the capital cities of each country shown in Figure 2.

To interprete and explain the characteristics of the dimensions of the cognitive maps, the first three dimensions were correlated with the five bipolar scales and geographic location of each nation (longitude and lattitude of the capital of each nation). Table 5 shows the results of the analysis of the American sample and Table 6 reports the results of the Korean sample.

(Table 5 and 6 about here)

For the American sample, the democracy-dictatorship scale was the most highly correlated with the first dimension (r=.95), accounting for 91 percent of its variance. For the Korean sample, the democracy-dictatorship scale was also highly correlated with the first dimension, but not as highly as for the American sample. Also, for Americans democracy-dictatorship is highly correlated with the good-bad scale (r=.97) while for Koreans democracy-dictatorship was highly correlated with both good-bad (r=.94) and militaristic-peace loving. (r=.98). Consequently, the first dimension

could be interpreted a a political system dimension.

For the American sample, the second dimension was best explained by the east-west geographical distance (longitude). This geographical distance explained 71 percent of the variance in the sencod dimension. For Koreans, the strong-weak scale best explained the second dimension (64 percent of variance explained).

None of the bipolar scales nor the geographical distances explained any significant portion of the third dimension. This dimension seems to differentiate Nigeria, an African nation, from the rest of the nations included in the study.

DISCUSSION

The most noticeable finding of the study is the similarity rather than the difference between the two international images of American and Korean children. Korean children have a larger cognitive map than American children, but in terms of dimensional structure, two samples were very similar, and the dimensions could be interpreted by similar attributes. This result is consistent with previous studies which demonstrated that poeple from widely differing cultures have stable and consistent cognitive representations about other nations (Forgas & O'Driscoll, 1984).

The first dimension, which accounted for almost half of the variance of the maps of both samples was considered to be a political system dimension. This finding is also consistent with previous research which found political alignment to be

one of the most important dimensions along with economic development. The finding that adolescents' cognitive maps are similar to that of adults is a significant finding. By the age of 12 to 14, international images are structurally well formulated.

The distance that Korean children perceive between themselves and the United States was much smaller than the distance the American children perceived between themselves and Korea. Korean children rated the United States extremely high, much higher than their own country overall. These findings suggest that a reference-group effect may be responsible. Reference group theory hypothesizes the influence on attitudes (including one's self-concept) of non-membership groups--groups to which people refer, admire and sometimes overestimate (Salazar, 1983).

There are a few other noteworthy differences. Korean children perceived themselves farther from Russia and Nicaragua than did American children. This may be due to the fact that Korea is divided into two countries and children are constantly reminded of the contrast between democratic and communist countries. China, however, was not perceived as distant as Russia or Nicaragua. Historically, Korea has long had a close affinity and friendly relation with China. Therefore, recent ideological differences may not have had as much of a negative impact on the perception of China as on Russia. Other studies have also found that people tend to differentiate the European communist countries from Asian

communist countries (Forgas & O'Driscoll, 1984).

The difference between the relative position of Korea in the two cognitive maps after rotation was almost three times as large as that of difference between the relative location of the U.S.A. This means that Korean children and American children have quite different images of Korea in relation to other countries while both groups perceived the position of the United States vis-a-vis other countries in a similar fashion.

This finding is accentuated by comparing the geographical location of Korea (Figure 2) with the cognitive maps of Americans and Koreans (Figure 1). In the former, Korea is clearly located close to China and Japan. The cognitive map of the American children also shows these three East Asian counties as a tight cluster. The Korean children, however, perceive their own country as much closer to the U.S.A. and France than to China and Japan. What is the source of this discrepancy? Would a similar pattern emerge for children from other countries (Israel, for example) regarding the perception of their own country in the world? Data collection planned for other countries in the future should reveal whether or not this is a common pattern.

The positions of Israel and France were very similar in both cognitive maps. This could be explained by the fact that: (1) both Israel and France are geographically far and culturally different from both Korea and the United States, and (2) both Israel and France are perceived very positively by both groups.

The present paper has made several contributions to the study of international images. It has demonstrated the utility of metric multidimensional scaling constructing accurate cognitive maps and comparing two different cultural groups. We were able to map the actual distances and shapes of these cognitive maps as well as to interpret their dimensionality using conventional scales. By augmenting the study with semantic differential scales and actual geographical distances, we were able to interpret the dimensions empirically and determine that both cultural groups use consistent dimensions to form their international images. The study found that the cognitive maps of 12-14 year-old children are similar to that of adults, lending support to the idea that by the early teens, the cognitive maps of other nations are already well structured.

REFERENCES

Barnett, G. & McPhail, T. (1980). "An examination of the relationship of United States Television and Canadian identity," International Journal of Intercultural Relations, 4, 219-232.

Brigham, J. (1971). "Ethnic stereotypes," Psychological Bulletin, 76, 15-38.

Chandra, S. (1967). "Stereotypes of university students toward different ethnic groups," Journal of Social Psychology, 1967, 71, 87-94.

Chase, S. (1939). The Proper Study of Mankind. New York: Harcourt, Brace & Co.

Forgas, J. & O'Driscoll, M. (1984). "Cross-cultural and demographic differences in the perception of nations," Journal of Cross-Cultural Psychology, 15, 199-222.

Funk, S., Horowitz, A., Lipshiz, R., & Young, F. (1976). "The perceived structure of American ethnic groups: The use of multidimensional scaling in stereotype research," Sociometry, 39, 116-130.

Gilham, J. & Woelfel, J. (1977). "The Galileo system: preliminary evidence for precision, stability, and equivalence to traditional measures," Human Communication Research, 3, 222-234.

Goodman, M. (1952). Race Awareness in Young Children. Revised ed. New York: Collier.

Hamilton, D. (1981). Cognitive processes in stereotyping and intergroup behavior. Hillsdale, N.Y.: Lawrence Erlbaum Associates.

Harding, J. et al. (1969). "Prejudice and ethnic relations," in G. Lindzed & E. Aronson (Eds.), Handbook of Social Psychology (Vol. 5) (2nd ed.). Reading, Mass: Addison-Wesley.

Heindel, R. (1937). "American Attitude of British Schoolchildren," School and Society, 46, 838-840.

Jahoda, G. (1959). "Nationality preferences and national stereotypes in Ghana before independence," Journal of Social Psychology, 50, 165-174.

Jones, R. & Ashmore, R. (1973). "The structure of intergroup perception," Journal of Personality and Social Psychology, 25, 428-438.

Katz, D. & Braly, K. (1933). "Racial stereotypes of one hundred college students," Journal of Abnormal and Social Psychology, 28, 281-290.

Kelly, G. (1955). The Psychology of Personal Constructs. New York: Norton.

Kincaid, L., et al. (1983). "The cultural convergence of Korean immigrants in Hawaii: An empirical test of a mathematical theory," Quality and Quantity, 18, 59-78.

Lambert, W. and Klineberg, O. (1967). Children's Views of Foreign People. New York: Appleton-Century-Crofts.

Lippmann, W. (1922). Public Opinion, New York: Harcourt Brace.

Pioget, J. (1952). The Origins of Intelligence in the Child. New York: International University Press.

Robinson, J. & Hefner, R. (1967). "Multidimensional differences in public and academic perceptions of nations," Journal of Personality and Social Psychology, 7, 251-259.

Salazar, J. (1983). "Degree of development and distance as related to mutual perception and attitudes among students in seven American countries," in Deregoski, J., Dziurawiec, S., & Annis, R. (Eds.), Expiscations in Cross-Cultural Psychology, Swets and Zeitlinger B.V., Lisse.

Sherman, R. (1973). "Dimensional salience in the perception of nations as a function of attitudes toward war and anticipated social interaction," Journal of Personality and Social Psychology, 27, 65-73.

Vaughan, G.M. (1964). "The development of ethnic attitudes in New Zealand school children," Genetic Psychology Monographs, 70, 135.

Vinacke, W. (1949). "Stereotyping among national-racial groups in Hawaii: A study in ethnocentrism," Journal of Social Psychology, 30, 265-291.

Wish, M. (1970). "Differences in conceptual structure of nations: An exploratory study," Journal of Personality and Social Psychology, 16, 361-373.

Woelfel, J. (1972). "Procedures for the precise measurement of cultural processes," University of Illinois, unpublished manuscript.

Woelfel, J. & Fink, E. (1980). "The Measurement of Communication Processes: Galileo Theory and Method. New York: Academic Press.

Woelfel, J., et al. (1980). How to Do a Galileo Study. Albany, N.Y.: Good Books.

Yum, J. (1984). "International Images and international communication experiences," paper presented at the International Communication Association, San Francisco, May.

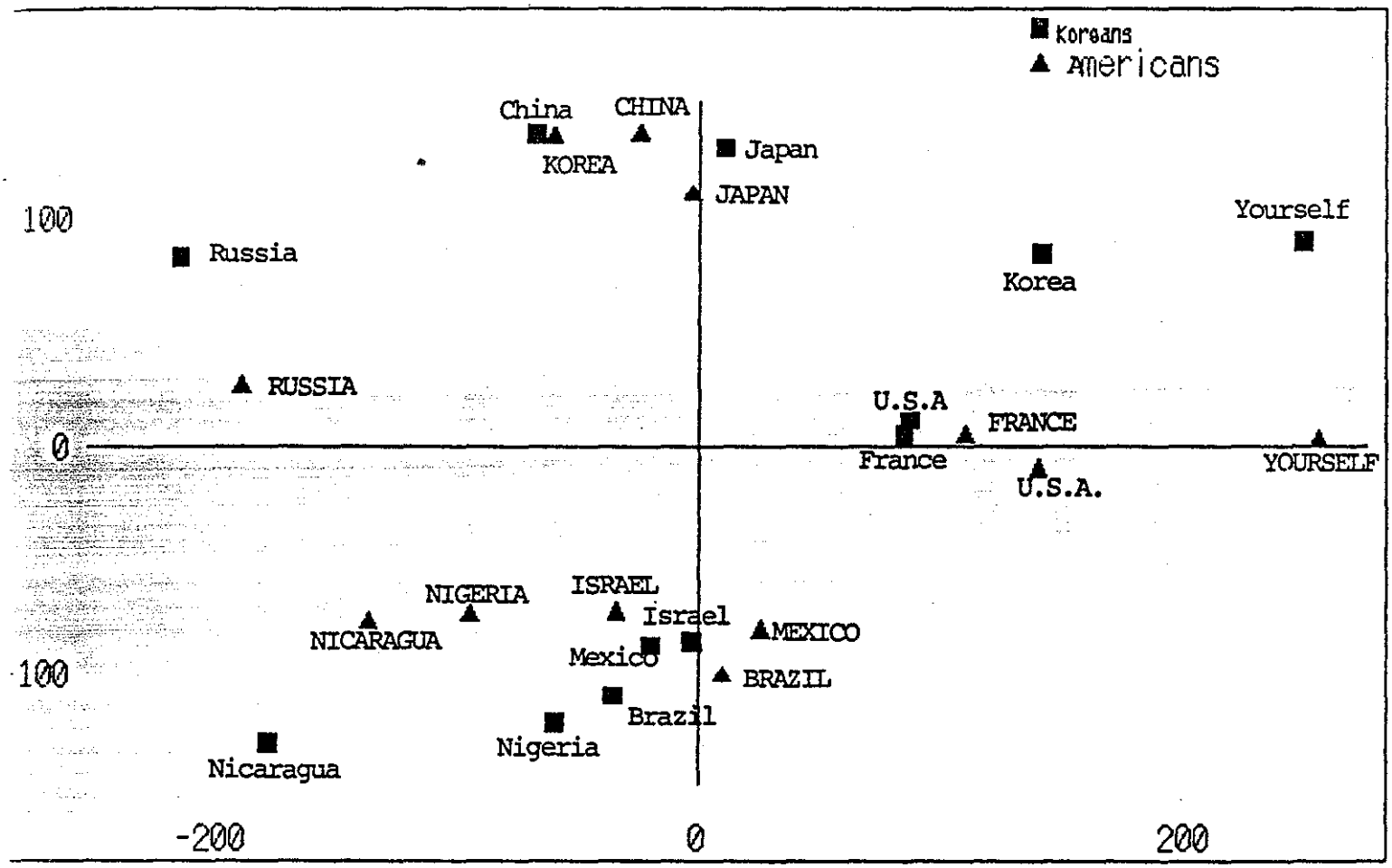

Figure 1. Comparison of American & Korean International Images in Two Dimensions

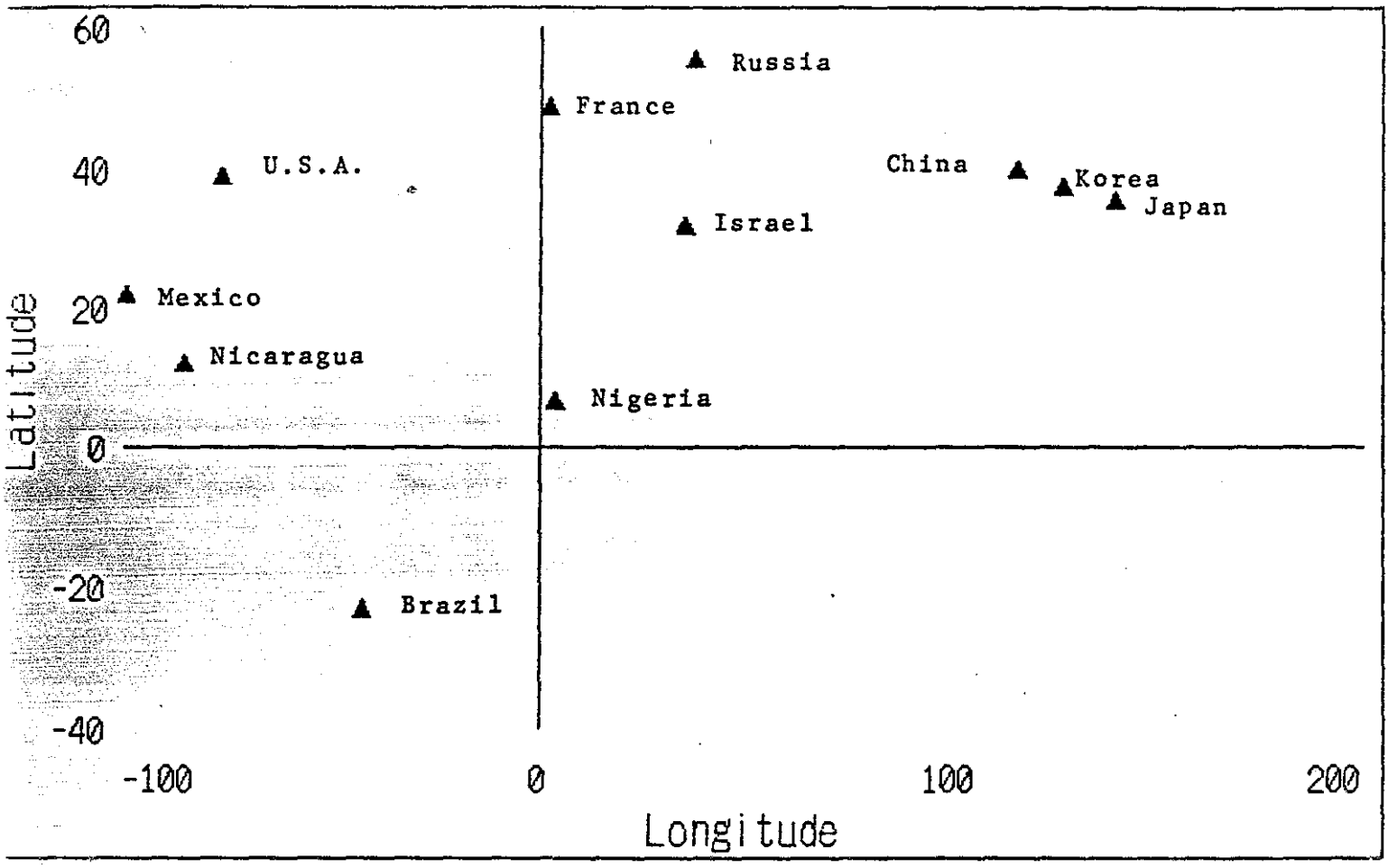

Figure 2. Two Dimensional Map of the Capital Cities of each Country by Actual Latitude and Longitude

Table 1. The Means Matrix of Paired Comparison: U.S.A.

	U.S.A.	Russia	Japan	Brazil	Mexico	Israel	Nicaragua	France	China	Korea	Nigeria	Yourself
U.S.A.												
Russia	338											
Japan	210	221										
Brazil	219	261	237									
Mexico	160	273	240	144								
Israel	242	251	255	246	239							
Nicaragua	285	158	256	227	212	236						
France	111	298	227	221	246	274	309					
China	216	195	141	288	262	283	286	242				
Korea	251	220	116	283	257	278	266	279	170			
Nigeria	269	218	280	253	264	249	246	288	273	297		
Yourself	31	446	271	292	266	328	410	185	313	360	390	

Table 2. The Means Matrix of Paired Comparison: Korea

	U.S.A.	Russia	Japan	Brazil	Mexico	Israel	Nicaragua	France	China	Korea	Nigeria	Yourself
U.S.A.												
Russia	298											
Japan	157	201										
Brazil	194	317	295									
Mexico	194	299	291	129								
Israel	273	354	283	206	235							
Nicaragua	327	290	301	206	297	285						
France	105	271	180	223	228	267	332					
China	238	151	158	269	230	280	331	307				
Korea	188	407	152	218	271	264	423	196	245			
Nigeria	309	333	306	219	216	271	261	337	319	366		
Yourself	240	535	197	380	387	296	503	224	292	36	361	

Table 3. The Means of Semantic Diffentials

	Poor-Rich		Dictatorship Democracy		Militeristic Peace-Loving		Weak-Strong		Bad-Good	
	USA	Korea	USA	Korea	USA	Korea	USA	Korea	USA	Korea
Russia	5.50	5.55	2.63	1.89	2.70	1.90	7.51	8.35	3.51	1.92
Japan	5.72	7.90	5.56	6.40	5.50	6.14	5.05	7.03	6.15	4.71
Brazil	4.48	4.60	5.33	6.50	5.57	6.62	4.16	4.41	5.74	6.45
Mexico	3.90	4.50	5.25	6.25	5.64	6.43	4.00	4.37	5.63	6.35
Israel	4.41	5.28	5.06	6.61	4.68	6.19	5.01	5.64	5.34	6.43
France	6.54	7.59	6.47	7.86	5.47	7.58	5.65	6.92	6.92	7.48
China	5.24	4.62	4.33	3.17	4.83	3.57	5.63	6.56	5.56	3.98
Korea	3.96	5.36	4.55	7.68	4.98	7.79	4.20	4.80	5.22	7.83
Nigeria	3.78	3.51	4.58	5.68	4.97	6.29	3.96	3.51	5.10	5.98
U.S.A.	8.05	8.76	8.12	8.63	4.49	7.89	8.28	8.66	7.02	7.71
Nicaragua	3.70	3.57	3.72	4.95	3.78	5.40	4.61	3.81	4.11	5.39

Total Mean (5 objectives combined)

	U.S.	Korea
Russia	4.27	3.89
Japan	5.43	6.40
Brazil	4.82	5.65
Mexico	4.78	5.53
Israel	4.77	5.96
France	6.07	7.40
China	5.03	4.29
Korea	4.35	6.66
Nigeria	4.14	4.98
U.S.A.	7.18	8.29
Nicaragua	3.77	4.50

Table 4 . The Differences Between International Images of Korean and American Adolescents in Multi-dimensional Space

U.S.A.	83.77
RUSSIA	84.58
JAPAN	76.41
BRAZIL	67.53
MEXICO	100.97
ISRAEL	39.26
NICARAGUA	89.76
FRANCE	32.98
CHINA	57.14
KOREA	202.45
NIGERIA	63.06

Table 5. The Correlations Among the Three Dimensions, Five Bipolar Scales, and East-West, North-South Measures: American Adolescents

	Dimension 1	Dimension 2	Dimension 3	Rich-Poor	Democracy-Dictatorship	Militaristic-Peace Loving	Strong-Weak	Good-Bad	East-West	North South
Dimension 1										
Dimension 2	-.00									
Dimension 3	-.02	-.00								
Rich-Poor	.63	.27	.21							
Democracy-Dictatorship	.95	-.08	-.05	.67						
Militaristic-Peace Loving	.65	-.02	.12	-.06	.55					
Strong-Weak	.20	.22	.21	.84	.26	-.56				
Good-Bad	.96	.09	.09	.67	.97	.64	.22			
East-West	-.21	.84	.20	-.00	-.26	.05	-.04	-.09		
North-South	.05	.62	.23	.51	.01	-.37	.61	.07	.43	

Table 6. The Correlations Among the Three Dimensions, Five Bipolar Scales, and East-West, North-South Measures: Korean Adolescents

	Dimension 1	Dimension 1	Dimension 3	Rich-Poor	Democracy-Dictatorship	Militaristic-Peace Loving	Strong-Weak	Good-Bad	East-West	Nort Sout
Dimension 1										
Dimension 2	.07									
Dimension 3	.24	-.03								
Rich-Poor	.57	.49	.46							
Democracy-Dictatorship	.70	-.44	.53	.49						
Militaristic-Peace Loving	.66	-.54	.47	.34	.98					
Strong-Weak	.20	.79	.24	.80	-.07	-.24				
Good-Bad	.64	-.60	.50	.24	.94	.97	-.27			
East-West	.48	.53	-.48	.16	-.20	-.22	.24	-.28		
North-South	.29	.75	.03	.54	-.14	-.25	.73	-.24	.43	