

INTERNATIONAL IMAGES AND COMMUNICATION PATTERNS

June O. Yum

State University of New York at Albany

Paper presented at the Thirty-Fourth Annual Conference of the International Communication Association, May 24-28, 1984, San Francisco, California.

- * The study was supported by the grant from NHK and the University of Tokyo in collaboration with Professor Hiroshi Akuto.
- ** The author is grateful for the assistance in data analysis provided by Hiroshi Akuto, Shoji Tsuchida, Jong Young Lee, Rick Holms, and Joe Woelfel.

INTERNATIONAL IMAGES AND COMMUNICATION PATTERNS

I. INTRODUCTION

For decades, social scientists have tried to understand international images and the factors that influence the formation of international images. The biggest effort was initiated by UNESCO in 1947. The UNESCO General Assembly, meeting in Mexico City, 1947, authorized a study of "Tensions Affecting International Understanding" and as a consequence conducted a number of studies on such topics as the nature and distribution of national stereotypes, their prevalence in the mass media, and methods by which they might be modified. This thrust for international understanding was the result of World War II and the subsequent Cold War. The general notion that war starts within our minds and with the mutual perceptions we have of one another were the underlying assumptions in the studies of international images during that period. The interest in international images faded by the 1960's, and most image studies or more specifically "stereotype" studies have veered toward ethnic or racial stereotypes (Donagher, et al., 1975; Lemon, 1977; Northcott, et al., 1975), stereotypes of masculinity and femininity (Frueh & McGhee, 1975; Roberts, 1971; Sappenfield, 1965; Sherriffs & McKee, 1957), and stereotypes of aging (Tuckman, 1956, 1958; Arnhoff, Leon & Lorge, 1964). In fact, there was increase in stereotype research in the 1970s but it was almost completely attributable to investigations of how women and men are perceived. In 1968 only one sex stereotype study appeared in

the Psychological Abstracts; a decade later in 1977, 159 abstracts, fully 78% of the entries under "Stereotyped Attitudes" concerned beliefs about the personal attributes of women and men. By 1977, 45% of the stereotype entries in the Sociological Abstracts dealt with sex (Hamilton, 1981).

The cross-cultural investigation of international images should become more prevalent as the frequency that countries interact increases. Furthermore, we are living in an age when "small" disagreements and wars among nations can easily eliminate humanity through the destruction of nuclear war (Merrill, 1970). Therefore, it is vital for us to understand as accurately as possible the mutual images held by people from different nations.

A review of the literature has revealed a methodological deficiency in the existing studies of international images. International images are usually perceived as "cognitive maps" but the research methodologies utilized are not really able to capture this concept. Hamilton (1981) maintained that the value of past research was attenuated, in large part because workers persisted in the use of convenient methods and failed to consider significant conceptual issues. When such issues were raised they were not tied to methods of data gathering and analysis.

In the present study, we go beyond the treatment of international image as an abstract concept. Multi-dimensional scaling methods are employed to investigate international images as bona fide cognitive maps that a group

of people have regarding different countries vis-a-vis their own country.

II. THEORY

International image studies have their roots in studies of stereotyping and prejudice. Stereotyping as a concept was introduced by Walter Lippmann(1922) in his work on public opinion. According to Lippmann, stereotypes are like "pictures in our heads" we construct to simplify matters in too complex a world to be known or experienced directly. In this context we are concerned with the pictures in people's heads referring to their own or to other national groups. The most common method used to test the concept empirically was the checklist method developed by Katz and Braly in 1933. Subjects of their study were asked to choose from a given list the adjectives which best described various national groups. Results showed a high degree of consensus among subjects on the traits assigned to national groups. A slight modification of this technique was used by Buchanan and Cantril(1953) in studying international images with representative samples of one thousand subjects in each of nine countries (Australia, Britain, France, Germany, Italy, The Netherlands, Norway, Mexico, and the United States) in a survey conducted under UNESCO's auspices.

Numerous studies have since investigated the stereotypes of one national group toward others and/or self-stereotypes. But in terms of the scope of study and the method employed, few extended beyond the Katz and Braly paradigm. Studies carried out by Vinacke(1949),

Jahoda(1959), and Chandra(1967) all followed the Katz and Braly paradigm. Another method used was the semantic differential scales in which subjects give each nationality group a score from 1 to 7 on a continuum from "dislike" to "like"; from "imitative" to "original"; from "ruthless" to "fair play," etc. (Gundlach, 1944). Heindel(1937) used a Likert-type scale to measure the extent to which school children agree or disagree with 24 statements about America. Another technique used was the sentence completion technique, with items such as "The thing I admire America for is..." or story writing in which foreigners play a part (Kerr, 1943). Lambert and Klineberg(1967) used detailed interviews to explore the stereotypes that children age from 6 to 14 held for nine nations (Japanese, Bantu, Chinese, Russians, Americans, British, Canadians, French, and Italians).

Another group of studies used content analysis of the mass media, and were labeled as "public stereotypes" as opposed to "stereotypes held by individuals" (Kleinberg, 1950). Such diverse mass media as newspapers, magazines, books (including textbooks), films, radio, and television have been analyzed.

All in all, as Harding and his colleagues(1969, p.7) put it, the adjective checklist procedure "has completely dominated the field since its introduction." There appear to be several reasons why the checklist has been such a successful exemplar (Hamilton, 1981, p.12): (1) The adjective checklist is easy to administer and score. (2) It can be

extended almost indefinitely (e.g., the stereotype of any target can be assessed) and poses many puzzles (e.g., do stereotypes change over time?) (3) Although the checklist (as most often used) does commit one to defining stereotypes in terms of agreement across respondents, it is neutral on other points of contention regarding stereotypes. Psychology and sociology are the two main fields in which stereotype studies were conducted, but in both fields methodological critiques were rare. In 1965, Ehrich and Rinehard did criticize the adjective checklist technique. As with earlier critiques (Eysenck & Crown, 1948), however, this did little to alter the course of stereotype research (Hamilton, 1981).

Although stereotype studies do provide a theoretical groundwork, it is questionable whether the concept of stereotype adequately applies to the phenomenon that we are interested in, namely, international understanding and perception. Triandis(1967) distinguishes between stereotypes, categorizations, evaluations, and behavioral intentions, all of which relate to what may be called the "image" of our own and other groups.

Another problem of the concept "stereotype" is its negative connotation. Early studies on stereotype equated stereotype with prejudice and defined it as a bad generalization/category/concept because it is incorrectly learned, overgeneralized, factually incorrect, and rigid (Klineberg, 1951; Katz & Braly, 1935; Adorno, et al., 1950; and many others). This tendency was the strongest among researchers with a sociocultural orientation. Later,

researchers with a cognitive orientation suggested that stereotypes and stereotyping are not essentially different from other cognitive structures and processes. Still the negative connotation attached to stereotype prevails. In this paper, therefore, international "image" is used on the grounds that it is broader and more inclusive, and void of value connotations.

Conceived within the framework of cognitive theories, an image of a nation constitutes the totality of attributes that a person recognizes (or imagines) when he/she contemplates that nation (Scott, 1965). The concept of "maps" which represent reality but are not themselves reality is the best analogy that we can make in the study of international images. A study of international images is an endeavour to expose for examination the maps or pictures of the nations of the world which are in the thoughts of the citizens of several countries. Chase(1948) elaborates the analogy further:

"Inside each of us lies a picture of the world. It stands for the whole realm of material objects, happenings, relationships, out there. Into our picture has gone everything we know, or think we know. It is our map of reality, without which we could not find our way through life at all. We are well adjusted in proportion to its correctness and in proportion as we remember its limitations (quoted by Buchanan and Cantril, 1953, p.2)."

To draw an accurate map, it is necessary to be able to estimate the distance between each attribute that are to be included in the map. A complex nation-image demands a complex attribute structure for viewing it. The early usage

of "maps" in image studies were basically figurative in that the distances between attributes (either names of nations or characteristics of nation) were not measured directly.

Instead, respondents were asked to evaluate each nation individually and independently. Clusters of attributes assigned to each nation or level of favorableness or unfavorableness were used as indicators of distances between nations. This type of methodological limitation causes the concept "cognitive map" to remain as a metaphor rather than become a spatial representation of images of nations that a group of respondents have in their heads.

The only exception is the study done by Wish(1971). Subjects in his study performed pairwise similarity judgments and friendship judgments among 12 nations. The pairwise similarity data were then entered into the INDSCAL multi-dimensional scaling program to produce a spatial configuration of 12 nations judged. It was based on the assumption in INDSCAL that subjects' judgments of similarity (or any other measure of "psychological proximity") between pairs of stimuli depend on the distances between stimuli in an underlying "psychological space" common to all subjects (Wish, 1971, p.313). This study, however, was based upon data from 18 students in a psychological measurement class and the main purpose of the study was to demonstrate the potential relevance of multidimensional scaling procedures to marketing research rather than to international image research. For instance, there is no theoretical discussion of international image studies. The study, however,

demonstrated the strength of multidimensional scaling methods in representing cognitive maps.

In the present study, cognitive maps were investigated employing a method of direct magnitude estimates of the perceived distances among seven countries (the United States, England, China, Italy, Japan, France, Russia), two descriptors (Economic abundance, National art and culture), and the self-concept. The maps were then computed by means of the Galileo(TM) metric multidimensional scaling program.

Once the cognitive map is accurately drawn, the next step is to discover the similarities and differences in these "maps" that are related to differences of nationality, culture, and international experiences. Buccanan and Cantril (1953) suggested that the differences between nations would be perceived in terms of the following context or frame of reference: (1) the bipolar world, (2) World War II, (3) common boundaries, (4) common language/culture, and (5) neutrality. Their study was conducted only a few years after the World War II and therefore World War II was perceived to be an important factor to differentiate international images. By controlling political differences, i.e., by selecting samples only from those who have similar political ideology (all democratic countries), we can test whether or not cultural differences will create significantly different cognitive maps.

H1: Cultural differences will have a significant influence on the international images that different national groups hold.

Several studies have found that the similarity structure of cognition is more stable and higher in inter-subject agreement than preference structure (Wish, 1971; Steffler, 1972; Mauser, 1983). For instance, Wish(1971) reported that individual differences were substantially greater when subjects rated how much they like different countries than when they indicated how similar countries are to their own hypothetical ideals. There was almost twice as much agreement on the similarity scale than on the "I like" scale (51% versus 29% of the variance accounted for by the first dimensions respectively). Woelfel(1980) suggests that the distances between the self-concept and other objects/attributes be treated as an attitudinal structure while the distances among the objects/attributes themselves be treated as a belief structure. Preference for a nation can be measured adequately by how closely one puts oneself to a given nation. If one likes a country, we can assume that he/she would put himself/herself closer to that country than another country that is not preferred as much. By the following logic it is hypothesized that:

H2: The distance between oneself to nations are less stable than the distances among the nations themselves regardless of nationality.

International images are not frozen into a group's existence but modifiable by outside forces. If the cognitive map is a consequence of the placement process of the incoming stimuli, we can hypothesize that the formation of a cognitive map will be related to the amount and kind of information we receive and process. The influence of communication on a

person's cognitive structure, and thereby his/her image formation, is apparent when one considers that any new categories can be added only through new information. In his initial discussion of the concept, Lippmann pointed out that "pictures in our heads" are related to the communication and distribution of knowledge. In other words, the more frequent the communication, the less likely will rigid and faulty images form. Fishman (1956) suggested that one of the major reasons for a stereotype to change is new information which comes through communication. The effect of information about other nations may be to increase the number of attributes that a person can bring to bear in assessing any nation (Scott, 1965). A number of studies on immigrants, visitors, and foreign students have found that the perception of the host society becomes more complex and refined as one interacts more with members of the host society (Coelho, 1958; Lysgaard, 1955; Schild, 1962; Kim, 1978; Yum and Wang, 1983). The effect of firsthand experience is reduction of stereotyping, the shifting of the images from simple black and white perceptions to more qualified perceptions of the foreign reality. Also, if the information is of fairly wide scope and reasonably accurate, an increase in the information would presumably be accompanied by an increase in the dimensional complexity of the cognitive map (Scott, 1962). Therefore, it is hypothesized that:

- H3: Those who have had international communication experiences will have more complex international images (cognitive maps) than those who do not have such experiences.

*OKe
Dawsonski, Hal
1977.*

Any substantial exposure to foreign culture and foreign people would not only affect one's perception of others but also one's own self-image. A number of studies have found that American tourist groups have returned with a greater appreciation of America and an intensified identification with America (Smith, 1954; Issacs, 1961). Other studies have demonstrated that travel to foreign countries moved the travelers closer to their domestic policy (Useem and Useem, 1955; Bauer, Pool, & Dexter, 1963). The case was dramatically illustrated by the study of American Blacks who had gone to Africa in search of their own identity (Isaacs, 1961, 1963). In Africa they discovered that they were more American than they knew. In this study, it is hypothesized that:

is that about
MEDIA IMAGES?
BARNETT
MEMORIAL
1979.

H4: The distance between one's own country and self-concept is smaller among those who have international communication experiences than those who do not have those experiences.

III. RESEARCH DESIGN AND METHODOLOGY

Sample Selection

From 1981 to 1982, a survey was conducted to investigate the communication patterns, international perceptions, and political behavior in three different countries: Japan, Hong Kong, and the U.S.A. Due to limited resources and time, data were collected from college students rather than the general public. The Japanese sample consisted of 237 undergraduate students at the University of Tokyo, the Hong Kong sample, 232 at the Chinese University of Hong Kong, and the American sample, 232 at the State University of New York at Albany,

and 136 at the University of Hawaii at Manoa.* Considering that Hawaiian culture and its population mix are very different from the mainland U.S.A., the sample from the University of Hawaii was treated as a distinct American subculture apart from the SUNY sample. (According to the 1980 population census of Hawaii, 33.3% of the people are Caucasian, 24.8% are Japanese, 15.6% are Hawaiians or part Hawaiian, 11.3% Filipino, 5.8% are Chinese, 1.9% are Korean, 1.8% are blacks, and 5.9% are others.)

For all samples a self-administered survey was conducted in classes using native-language questionnaires which were finalized after double translation procedures.

Measurement

The measurement of the cognitive map** of each national group was accomplished by means of a questionnaire using the method of complete pair comparisons and direct magnitude estimation of the differences between nations and their attributes (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 arithmetic-mean conception of the distance between objects i and j as seen by all members of the group (Woelfel, 1972). Each

*In the following pages, University of Tokyo sample will be referred to as Tokyo, University of Hawaii as Honolulu, State University of New York at Albany as Albany, and Chinese University of Hong Kong as Hong Kong for the sake of convenience and clarity.

**In this paper, cognitive map and international images will be used interchangeably.

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 concepts, so the aggregate self-concept of the group was defined by the row and column of the matrix which represent the measured relationship of the average self to all of the other concepts in the set. This conceptualization may be applied to compare a number of different cultures. The difference between two cultures $S(1)$ and $S(2)$ at any one point 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 scalar products of these matrices, the points representing beliefs may be projected onto the axes of a multidimensional Riemann space (Woelfel & Fin, 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 $N \times N$ 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 7 nations, two attributes, and self-concept.

1. United States
2. England
3. China
4. Italy
5. Japan
6. France
7. Russia
8. Economic abundance
9. National art and culture
10. Yourself

The 10 concepts required 45 paired-comparison judgments per respondent, according to the following instructions: "If France and England differ by 100 units, 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 10 concepts. The paired comparison data for each university sample were entered into the Galileo(TM) version 5.2 computer program at the State University of New York at Albany. The maximum-value option was set at 1000 to eliminate missing data (coded as 99999) and extreme values (1,001 or above).

The stability of the preference structure was measured by the mean standard error of the seven paired-comparisons between self-concept and the seven nations. Likewise, the stability of the similarity structure was measured by the mean standard error of 21 paired-comparisons among the seven nations themselves.

The complexity of the cognitive map was measured by

the dimensionality of the multidimensional space, that is degree to which the amount of variance explained by the six real dimensions is evenly distributed as opposed to peaked in the first few dimensions. Previous studies used the amount of variance explained by the first dimension alone as the level of complexity. ^(SOURCE) In this study, the amount of variance ^(? → 90?) explained by each dimension was entered into the general formula for calculating relative entropy. The more evenly distributed (complex) cognitive structure has a larger relative entropy than one peaked on the first one or two dimensions.

$$H_{rel} = \frac{-\sum P_i \log P_i}{\log N}$$

where H_{rel} is the relative entropy value; P_i is the relative percentage of variance explained by each dimension(i); \log is the natural logarithm function; and N is the number of alternative in the set (in this case, 6 dimensions). The resulting measure varies from a value of 0.00 to 1.00. The low values indicate low relative entropy, the high values indicate high relative entropy (or greater cognitive complexity). In this study, the value calculated for relative entropy ranged from .5527 to .8166.

International communication experience was measured by the following question: 1. Have you ever been abroad? 2. Have you ever lived abroad? 3. Do you have any foreign friends or acquaintances? These three questions were designed to measure the different levels of international communication experience and were used separately. Table 1:

reports the percentage of people who travelled abroad, have lived abroad, and have foreign friends or acquaintances for each four samples.

(Table 1 about here)

IV. RESULTS

note this!
The mean matrices of the four samples are presented in Table 2 to Table 5. In all four samples, the distance between Russia and self was the largest while distance between one's own country and self was the smallest. The Japanese sample had the shortest distance between the self and Japan(36.95), while students from Hong Kong had rather long distance between the self and China(78.09). It is noteworthy that students from Honolulu perceived a shorter distance between the self and the United States than students from Albany. The grand mean of all 45 pairs of the Albany sample was the smallest among the four samples(126.59) while the grand means of Tokyo and Hong Kong showed a large and similar size (168.89 and 168.44 respectively) and Honolulu students are somewhat in between with a mean size of 154.86. The size of the cognitive map was also measured by sum of roots(trace) with results similar to the grand means. Albany had the smallest sum of roots(79,867) followed by Honolulu(124,875), Hong Kong(140,660), and Tokyo(145,658).

The spatial configuration of the results are presented in Figure 1 to Figure 4.

(Figure 1 to Figure 4 about here)

While Italy, France, England, and the U.S.A. are all located in the left side of the map, China and Japan are located in

the right side of the map and Russia is somewhat isolated by itself. The one concept that is the most different from country to country is the self-concept as expected since each sample would put itself close to its own country. It is noteworthy that "National art and culture" is consistently in the middle of the map among all four samples meaning that each of the seven countries included has a legitimate claim on it.

The differences among the grand means of the four samples were all statistically significant, except between Tokyo and Hong Kong. Table 6 reports the results.

(Table 6 about here)

Therefore, it is concluded that sizes of the cognitive maps held by four samples are significantly different except for the difference between Tokyo and Hong Kong.

To examine the differences in configurations and shape of the maps, each of the conceptual patterns were compared to each other by means of the computer routine for rigid-body rotations using a least-square criterion. The results reveal the differences remaining between the ten concepts of one space and another after the rotation has transformed away spurious differences in the orientations of two reference frames (Woelfel & Fink, 1980).

Table 7 represents the differences between each concept of one cognitive map and another (six comparisons are required for four cultures).

(Table 7 about here)

Table 8 reports the grand mean differences between each pair of cognitive maps and t-test results.

(Table 8 about here)

The six differences for all pairs were statistically significant. The smallest differences is between Tokyo and Hong Kong (32.4) while the largest difference is between Albany and Hong Kong (50.7). The first hypothesis, which stated that the cognitive maps held by different cultural groups will be significantly different, was therefore supported by our data. It is noteworthy that the distance between Hawaii and Albany is bigger than the distance between Japan and Hong Kong, which further supported the hypothesis that Hawaii with its mixed cultures from Asia, the Pacific, and the U.S. mainland would be in between Albany and Tokyo or Hong Kong. A visualization of the results is presented in Fig. 5. It clearly demonstrates that Hawaii is in between Asia and the Eastern U.S. city, with Hong Kong and Albany the farthest apart.

To test the second hypothesis, the mean standard errors for seven pairs (between oneself and seven nations) were calculated (mean=13.76, S.D.=2.078) and the mean standard errors for 21 pairs (paired comparisons among seven nations themselves) (mean=9.92, S.D.=3.438). The difference between these two means was found to be statistically significant beyond the .001 level ($t = 8.3191$, $p .001$). Therefore, the second hypothesis was supported. The mean distance that one perceives among nations themselves had significantly smaller standard errors than the mean distances

between oneself and nations, indicating that the configuration among nations fluctuates less from sample to sample than the configuration between the self and nations.

To test Hypotheses 3 and 4, each sample was divided according to whether or not they have traveled abroad, have lived abroad, and whether or not they have foreign friends or acquaintances. This yielded twelve subsample comparisons. Table 9 reports the percentage of variance explained by six dimensions and the entropy score for each data set.

(Table 9 about here)

OK- The results were mixed. Eight out of twelve comparisons (those with asterisk) revealed differences in the direction as hypothesized (i.e., international communication experience produces more complex cognitive maps with larger entropy), but four comparisons were in the opposite direction. The only variable that had consistent results for four samples was having foreign friends or acquaintances. Those who have foreign friends or acquaintances have more complex cognitive maps than those who do not. The results from our study were not conclusive enough to support hypothesis three.

The influence of international communication experience on the perceived difference between the self and one's own country was tested only among Tokyo, Honolulu, and Albany samples because for Hong Kong Sample, China may not be perceived as their own country. Table 10 reports the mean distance between self-concept and one's own country and t-score for each comparison.

(Table 10 about here)

Among the three communication variables, having foreign friends had consistent results, in that those who had a foreign friends had smaller distances between themselves and their country among all three samples. The differences, however, were statistically significant only for the Tokyo sample and Honolulu sample. Having traveled abroad resulted in significant differences for the Tokyo and Honolulu samples in the hypothesized direction. The opposite phenomenon, however, was found in the Albany sample. Having lived abroad resulted in a statistically significant difference only for the Tokyo sample, but the direction was the opposite from that hypothesized. Those who have lived abroad perceived a significantly larger distance between themselves and Japan than those who have never done so. Having lived abroad had no statistically significant influence on Honolulu sample nor on the Albany sample. Therefore, we have to conclude that Hypothesis was only partially supported by our data.

V. CONCLUSIONS

In this paper, we have demonstrated the value of approaching international images from a cognitive orientation. Cognitive maps produced by the perceived differences of each cultural group can be accurately measured and compared by multidimensional scaling methods. Stereotype studies have provided the theoretic groundwork for international image studies, but most studies have been hampered by inadequate measurement procedures and conceptualization. The data gathered from four different

cultural points (Japan, Hong Kong, Honolulu, and Albany) successfully demonstrated that international images as indicated by cognitive maps do vary according to cultural differences and in a valid, meaningful way. The cognitive maps of Japan and Hong Kong were found to be the most similar in size and shape, while Albany and Hong Kong, and Albany and Tokyo were the most different. Honolulu, as a mixed culture located between Asia and the U.S., geographically as well culturally, was found to be between these two different cultural groups in terms of its cognitive map.

The relationship between international communication experiences and international images, however was not as straightforward as expected. Among the three variables included as international communication experiences only having foreign friends resulted in a consistent relationship among the four samples. Having foreign friends increased the complexity of each group's cognitive map and decreased the distance between self-concept and one's own country. This finding is congruent with previous research which has found that having established close and friendly personal relations with foreigners is the most important factor in changing one's international images (Sellitz & Cook, 1962). The simple dichotomous measurement of travelling abroad and having lived abroad is probably not sufficient to bring out the complex international experiences. Pool (1965) suggested that the effects of an international trip depends on the kinds of travel. Such aspects as purpose of travel, temporal and

spatial facts, the traveler's relations to the people he/she meets, the relation of the culture visited to the traveler's own culture, the ease or hardship a traveler experiences, and the traveler's personal factors most likely influence the effects of foreign travel. The experience of living abroad may have to be qualified according to the above factors and other factors such as duration of residence, living arrangement (such as being single or living with a host family, and so forth). Specialists on exchange programs have maintained that six-week trips are of very dubious value. The period is too short for the traveler to get over the initial culture shock, just long enough for one to get homesick, disoriented, and puzzled, but not long enough for him/her to acquire any perspective on the host culture (Pool, 1965). At this point we have to conclude that simple experience in foreign countries through travel or living does not automatically bring about changes among every cultural groups in international images as measured by these cognitive maps.

The major limitation of the study was its sampling. The sample for the study was a non-random sample from four universities rather than from the general public. Thus, the statistical tests were conducted only to demonstrate whether or not the differences were big enough rather than to infer to general populations or exceed random sampling error. University students are not ideal reference groups to test cultural differences in that they are more open to new experiences, possibly more open minded, and younger than the

general population. It is significant, however, that even with these sampling limitations this study did demonstrate meaningful cultural differences in international images. Cross-cultural studies with representative samples and with in-depth measurement of international communication experiences are recommended.

Bibliography

- Adorno, T. et al. The Authoritarian Personality. New York: Harper and Row, 1950.
- Arnhoff, F., Leon, M. & Lorge, I. "Cross-cultural acceptance of stereotypes toward aging," Journal of Social Psychology, 1964, 63, 41-58.
- Buchanan, W. and Cantril, H. How Nations See Each Other, Urbana: University of Illinois Press, 1953.
- Baver, R., Pool, I., & Dexter, L. American Business and Public Policy: The Politics of Foreign Trade. New York: Atherton Press, 1963.
- Chandra, S. "Stereotypes of university students toward different ethnic groups," Journal of Social Psychology, 1967, 71, 87-94.
- Chase, S. The Proper Study of Mankind. New York: Harcourt, Brace & Co., 1939.
- Coelho, G. V. Changing Images of Americans: A Study of Indian Students' Perception. New York: The Free Press, 1958.
- Donagher, P., et al, "Race, sex, and social example: An analysis of character portrayals on inter-racial television entertainment," Psychological Report, 1975, 6, 1023-1034.
- Eysenok, H. & Crown, S. "National stereotypes: An experimental and methodological study," International Journal of Opinion and Attitude Research, 1948, 2, 26-39.
- Fishman, J. "An examination of the process and function of social stereotyping," Journal of Social Psychology, 1956, 43, 27-64.
- Frueh, T. and P. McGhee, "Traditional sex role development and amount of time spent watching television," Developmental Psychology, 1975, 11, 109.
- Gilham, J. & Woelfel, J. "The Galileo system: preliminary evidence for precision, stability, and equivalence to traditional measures," Human Communication Research, 1977, 3, 222-234.

Gundlack, R. "The attributes of enemy, allied, and domestic nationality groups as seen by college students of different regions," Journal of Social Psychology, 1944, 19, 249-258.

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

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

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

Isaacs, H. Emergent American: A Report on "Crossroads Africa." New York: John Day, 1961.

Isaacs, H. The New World of Negro Americans. New York: John Day, 1963.

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

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

Kelman, H. (Ed.) International Behavior. New York: Holt, Rinehart and Winston, 1965.

Kerr, M. "An experimental investigation of national stereotypes," Sociological Review, 1943, 35, 37-43.

Kim, Y. "A communication approach to the acculturation process: A study of Korean immigrants in Chicago," International Journal of Intercultural Relations, 1978, 2(2), 197-224

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

- Klineberg, O. Tensions Affecting International Understanding. New York: Social Science Research Council, 1950.
- Klineberg, O. "The Scientific Study of National Stereotypes," International Social Science Bulletin, 1951, 3, 505-515.
- Lambert, W. and Klineberg, O. Children's Views of Foreign People. New York: Appleton-Century-Crofts, 1967.
- Lemon, J. "Women and blacks on Prime-time television," Journal of Communication, 1977, 27, 70-79.
- Lippmann, W., Public Opinion, New York: Harcourt Brace, 1922.
- Lysgaard, S. "Adjustment in a foreign society: Norwegian Fulbright grantees visiting the United States," International Social Science Bulletin, 1955, 7, 45-51.
- Mauser, G. Political Marketing. New York: Praeger Publishers, 1983.
- Merrill, J. "National stereotypes and international understanding," in International Communication, (eds. Fisher, H. and J. Merrill), New York: Hastings House, 1970.
- Northcott, H., Seggar, J., Hinton, J., "Trends in T.V. portrayals of blacks and women," Journalism Quarterly, 1975, 55, 741-744.
- Pool, I. "Effects of cross-national contact on national and international images," in Kelman, H. (ed.) International Behavior. New York: Holt, Rinehart and Winston, 1965.
- Roberts, C., "The portrayals of blacks on network T.V.," Journal of Broadcasting, 1971, 15, 45-54.
- Sappenfield, B. "Stereotyped perception of masculinity-femininity," Journal of Psychology, 1965, 61, 179-182.
- Schild, E. O. "The foreign student, as stranger, learning the norms of the host culture," Journal of Social Issues, 1962, 18(1), 41-54.
- Scott, W. A. "Cognitive complexity and cognitive flexibility," Sociometry, 1962, 25, 405-414.

Scott, W. "Psychological and social correlates of international images," in Kelman, H. (ed.) International Behavior. New York: Holt, Rinehart and Winston, 1965.

Scott, W. & Withey, S. The United States and the United Nations: The Public View. New York: Manhattan Publishing Co., 1958.

Sherriffs, A. and McKee, J. "Qualitative aspects of beliefs about men and women," Journal of Personality, 1957, 25, 451-464.

Smith, H. Changes in attitudes resulting from experiences in foreign countries. Unpublished Ph.D. dissertation, Harvard University, 1954.

Stefflre, V. "Some application of multidimensional scaling to social science problems," in Romney, A. Shepard, R., & Nerlove, S. (eds.) Multidimensional Scaling: Theory and Applications in the Behavioral Sciences, Vol. 2. New York: Seminar Press, 1972.

Triandis, H. & Vassiliou, V. "Frequency of contact and stereotyping," Journal of Personality and Social Psychology, 1967, 7, 265-291.

Tuckman, J. "Perceptual stereotypes about life adjustments," Journal of Social Psychology, 1956, 43, 239-245.

Tuckman, J. "The projection of personal symptoms into stereotypes about aging," Journal of Gerontology, 1958, 13, 70-73.

U.S. Commission on Civil Rights, Window Dressing on the Set; Women and Minorities in Television. Washington D.C.: U.S. Government Printing Office, 1977.

Useem, J. & Useem R. The Western Educated Man in India. New York: Holt, Rinehart and Winston, 1955.

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

Wish, M. "Individual differences in perceptions and preferences among nations," in C. King and D. Tigert (Eds.), Attitude Research Reaches Heights. Chicago: American-Marketing Assoc., 1971.

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

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

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

Yum, J. & Wang, G. "Interethnic perception and the communication behavior among five ethnic groups in Hawaii," International Journal of Intercultural Relations, 1983, 7, 285-308.

Table 1. Percentage of Respondents Who Have Travelled Abroad, have Lived Abroad, and have Foreign Friends or Acquaintances.

	Travelled Abroad	Lived Abroad	Foreign Friends
Tokyo	16% (N=37)	9% (22)	32% (76)
Honolulu	65% (86)	31% (42)	83% (109)
Albany	39% (91)	8% (18)	79% (186)
Hong Kong	36% (83)	7% (15)	64% (147)

Table 2. The Means Matrix of Paired Comparisons: Tokyo

	U.S.A.	England	China	Italy	Japan	France	Russia	Economic Abundance	National Art & Culture	Yourself
U.S.A.										
England	84									
China	262	267								
Italy	162	144	270							
Japan	172	174	119	200						
France	143	99	221	106	206					
Russia	247	221	185	212	262	174				
Economic Abundance	69	150	253	216	79	134	230			
National Art & Culture	144	81	111	81	127	69	138	182		
Yourself	186	189	168	236	36	196	272	148	150	

Table 3. The Mean Matrix of Paired Comparison: Honolulu

	U.S.A.	England	China	Italy	Japan	France	Russia	Economic Abundance	National Art & Culture	Yourself
U.S.A.										
England	107									
China	228	221								
Italy	156	132	244							
Japan	177	195	121	214						
France	144	93	228	95	213					
Russia	264	241	178	174	212	193				
Economic Abundance	95	120	172	137	56	100	178			
National Art & Culture	83	79	85	64	61	68	142	176		
Yourself	42	156	191	197	121	171	307	188	136	

Table 4. The Means Matrix of Paired Comparisons: Albany

	U.S.A.	England	China	Italy	Japan	France	Russia	Economic Abundance	National Art & Culture	Yourself
U.S.A.										
England	64									
China	198	166								
Italy	121	109	174							
Japan	141	147	107	142						
France	116	90	165	88	138					
Russia	183	183	100	162	156	155				
Economic Abundance	66	121	165	146	72	123	165			
National Art & Culture	72	68	119	76	64	76	127	115		
Yourself	53	105	201	137	153	117	221	121	.87	

Table 5. The Mean Matrix of Paired Comparisons: Hong Kong

	U.S.A.	England	China	Italy	Japan	France	Russia	Economic Abundance	National Art & Culture	Yourself
U.S.A.										
England	85									
China	268	214								
Italy	146	139	213							
Japan	157	166	144	181						
France	123	98	200	96	190					
Russia	239	228	165	206	222	204				
Economic Abundance	102	141	189	161	94	138	189			
National Art & Cultural	146	117	98	87	136	89	209	215		
Yourself	221	165	78	269	171	199	300	202	152	

Table 6. The Differences of Grand Means of Means
Matrix Among Four Samples

	Tokyo	Honolulu	Albany
Tokyo (Grand Mean = 168.89)			
Honolulu (154.86)	14.03**		
Albany (126.59)	42.30**	28.27**	
Hong Kong (168.44)	.45	3.58*	41.85**

*Statistically significant t value beyond .01 level.

**Statistically significant t value beyond .001 level.

Table 7. The Differences Between Each Concept of One
Cognitive Map and Another After Rotation

	<u>Tokyo-Honolulu</u>	<u>Tokyo-Albany</u>	<u>Tokyo-Hong Kong</u>	<u>Honolulu-Albany</u>	<u>Honolulu-Hong Kong</u>	<u>Albany-Hong Kong</u>
U.S.A.	54.95	24.13	43.62	32.19	73.37	59.83
England	27.35	28.79	17.47	29.59	19.82	11.57
China	35.16	76.95	24.97	54.28	44.97	32.82
Italy	26.37	41.54	45.87	48.39	31.60	39.87
Japan	13.01	66.30	47.79	30.95	36.24	51.79
France	14.30	20.54	18.69	36.26	17.22	32.37
Russia	25.55	56.28	36.44	64.58	58.06	57.17
Economic Abundance	36.77	38.06	17.90	17.41	12.27	41.37
National Art & Culture	41.03	30.69	45.95	7.33	44.77	56.55
Yourself	65.72	102.89	25.71	43.36	89.58	123.33

Table 8. The Grand Mean Differences between
Each Pair of Cognitive Maps after
Rotations.

	Tokyo	Honolulu	Albany
Tokyo			
Honolulu	34.0*		
Albany	48.6*	36.4*	
Hong Kong	32.4*	42.8*	50.7*

*Statistically significant t value beyond .001 level.

Table 9. Percentage of Variance Explained by Each Dimension and Entropy for Each Data Set

<u>Tokyo</u>		Dimensions						Entropy
		1	2	3	4	5	6	
Travelled	Yes	40.20	33.35	18.78	3.76	2.34	1.54	.7379
Abroad	No	43.66	30.15	14.34	7.23	3.28	1.31	.7594
Lived	Yes	40.10	33.41	17.53	4.91	3.58	.43	.7415
Abroad	No	43.22	30.56	14.60	7.01	3.18	1.40	.7599
Foreign	Yes	40.63	30.37	18.29	6.00	3.16	1.53	.7705 *
Friends	No	42.08	31.72	14.44	6.05	4.74	.94	.7624
<u>Honolulu</u>								
Travelled	Yes	43.67	27.22	12.18	8.40	8.16	.35	.7840 *
Abroad	No	48.89	25.31	13.30	7.28	4.10	1.09	.7461
Lived	Yes	53.35	26.11	10.56	5.86	3.21	.78	.6908
Abroad	No	42.45	29.17	13.48	7.96	5.11	1.80	.7919
Foreign	Yes	43.74	26.24	12.82	9.50	6.62	1.05	.7966 *
Friends	No	44.59	24.10	20.61	8.75	1.93	.01	.7361
<u>Albany</u>								
Travelled	Yes	45.78	24.55	15.78	8.82	4.64	.40	.7660 *
Abroad	No	61.10	17.26	12.77	5.87	2.96	.01	.6355
Lived	Yes	49.94	22.37	14.84	10.47	2.36	.01	.7202 *
Abroad	No	56.22	20.82	11.92	6.26	2.37	1.39	.6840
Foreign	Yes	50.31	23.57	12.47	7.80	3.34	1.56	.7385 *
Friends	No	71.34	12.75	7.11	4.87	2.55	1.35	.5527
<u>Hong Kong</u>								
Travelled	Yes	43.30	25.06	17.11	11.07	3.43	.01	.7655 *
Abroad	No	40.58	31.15	17.33	8.03	2.30	.58	.7547
Lived	Yes	62.38	20.56	10.65	3.56	2.82	.01	.6019
Abroad	No	38.43	29.71	17.94	8.91	3.54	1.43	.7985
Foreign	Yes	40.07	25.36	18.31	10.09	4.60	1.56	.8166 *
Friends	No	47.19	25.26	17.32	9.09	1.12	.01	.7115

Table 10. The Mean Distance Between Self-concept and One's Own Country Among Those Who Have Travelled Abroad, Lived Abroad, and Have Foreign Friends vs. Those Who Have Not Travelled Abroad, Not Lived Abroad, and Do Not Have Foreign Friends.

		Mean Distance	No. of Cases	t
<u>Tokyo</u>				
Travelled	Yes	32.51	37	3.43 **
Abroad	No	37.79	193	
Lived	Yes	44.54	22	3.30 **
Abroad	No	36.14	208	
Foreign	Yes	33.38	75	4.57 **
Friends	No	38.67	155	
<u>Honolulu</u>				
Travelled	Yes	39.33	86	4.98 **
Abroad	No	48.51	45	
Lived	Yes	43.76	42	.96
Abroad	No	41.97	90	
Foreign	Yes	39.26	107	1.85 **
Friends	No	44.13	23	
<u>Albany</u>				
Travelled	Yes	61.79	91	10.68 **
Abroad	No	47.06	142	
Lived	Yes	57.22	18	.88
Abroad	No	52.44	215	
Foreign	Yes	52.52	184	1.10
Friends	No	54.91	48	

*Statistically significant t value beyond .05 level.

**Statistically significant t value beyond .001 level.

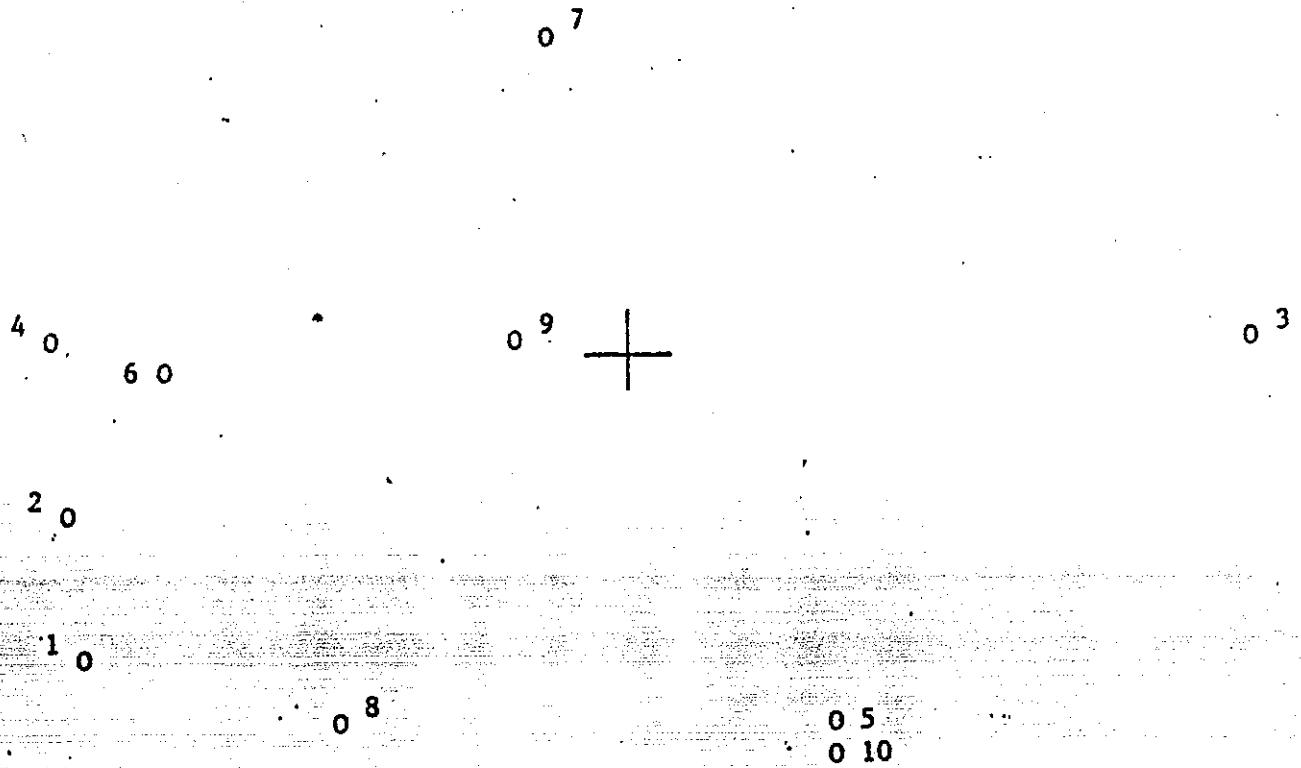


Figure 1: The Two Dimensional Plot of Cognitive Map for
TOKYO

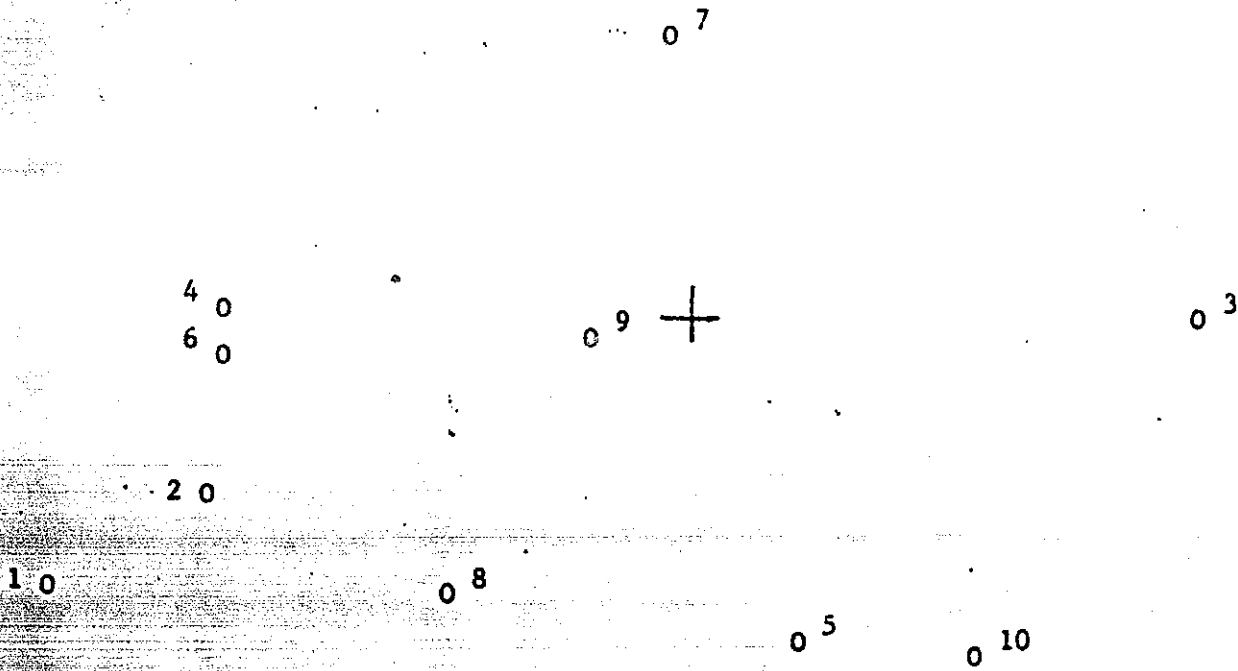


Figure 4: The Two Dimensional Plot of Cognitive Map for
Hong Kong

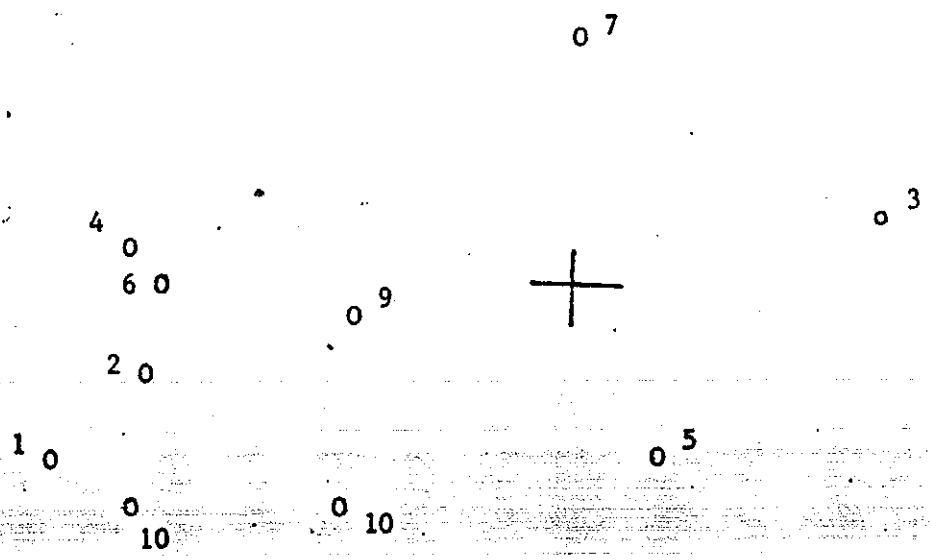


Figure 3: The Two Dimensional Plot of Cognitive Map for ALBANY

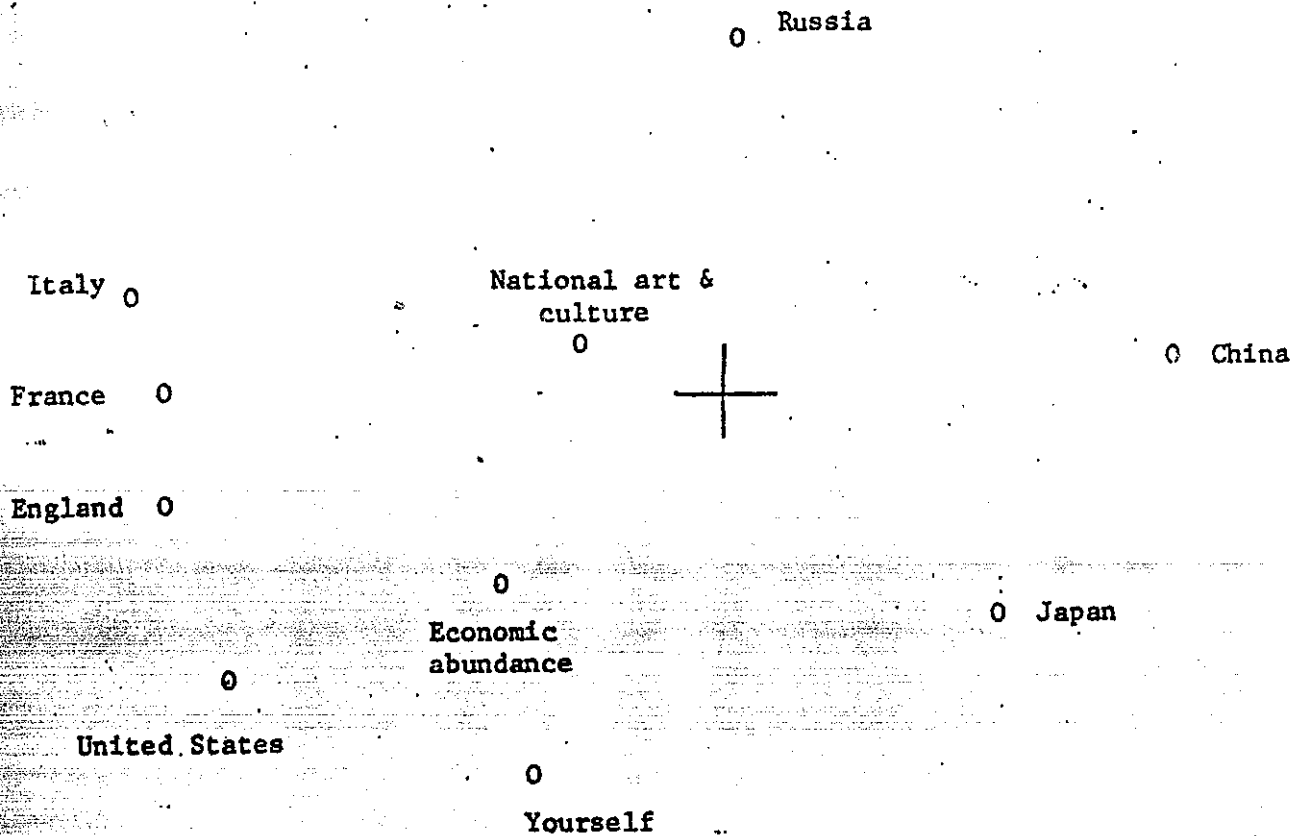


Figure 2: The Two Dimensional Plot of Cognitive Map for
HONOLULU

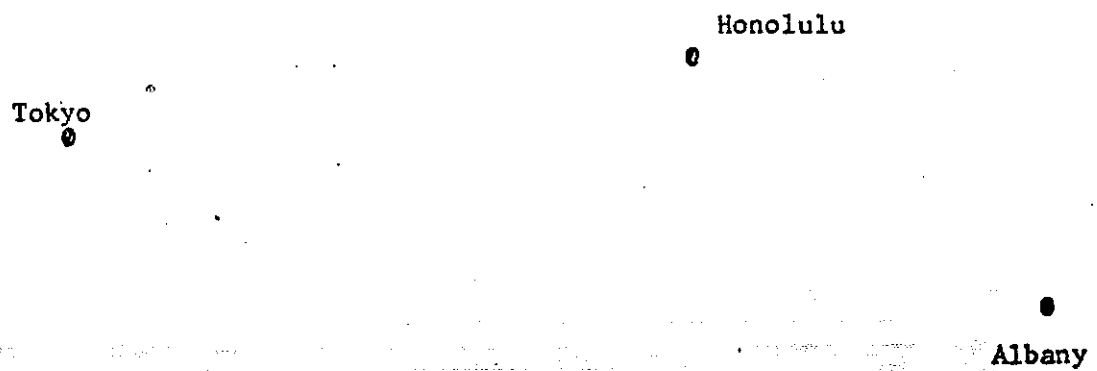


Figure 5. The Two Dimensional Plot of the Differences among the Entire Cognitive Maps of the Four Cultures