

The Influence of Social Networks on the Acculturation Behavior of Foreign Students¹

Tsung-chi Kenny Hsu

Department of Radio/TV/Film, The University of Texas at Austin

August E. Grant

Department of Radio/TV/Film, The University of Texas at Austin

Wei-wei Huang

Department of Mass Communication, Fu-jen Catholic University, Taipei, Taiwan

Cross-cultural communication scholars have looked at effects of interpersonal communication and both ethnic and host mass media uses on the acculturation behavior of immigrants for a long time. The present study employs an important network analysis concept, the social influence of alters on ego, in the field of cross-cultural communication. Using measures of alters' acculturation, English- and ethnic-language media uses, and years of residence in the U.S., a model is proposed and tested upon a sample of international students from a college campus. The results indicate that the alters' acculturation plays a central role in the pattern of relationships.

INTRODUCTION

To answer questions such as "what happens when individuals move from one culture to another" and "why are some immigrants more successful than others in adapting a new environment," social scientists have long employed the concept of acculturation to explain the process through which immigrants adapt themselves to the norms and values of the host culture (Gordon, 1964; Padilla, 1980; Gudykunst & Kim, 1984; Kim, 1977, 1988).

The immigrant acculturation experiences have been examined from anthropological, historical, sociological, psychological, social-psychological, or media perspectives since the 1890s (Berry, 1980, 1988; Herskovits, 1955; Kim, 1988; McGee, 1898; Redfield, Linton, and Herskovits, 1936). Unfortunately, a general agreement about what acculturation is has not been reached yet. Although it is understandable that scholars from different fields will look at acculturation from various perspectives, it should be pointed out that individual's adaptation to a new environment is a multi-dimensional process that may include economic, political, cultural, or other types of adaptation.

Departing from this premise, the present study focused on one type of acculturation experience, that is, newcomers' communication behavior. In the past, cross-cultural communication scholars have focused on the effects of interpersonal communication in the host society and both ethnic and host mass media uses on the acculturation behavior of immigrants. Among the general conclusions reached are: first, the more immigrants use host media, the more acculturated (or better termed adapted) they will be (De Fleur & Cho, 1957; Nagata, 1969); second, the less immigrants use ethnic media, the more adapted they will be (Kim, 1984, 1981); and finally, the more immigrants communicate with host people, the more adapted they will be (Gudykunst, 1986; Gudykunst, Ting-Toomey & Chua, 1988).

One important variable which has not received enough attention from communication scholars is the individual's personal communication network. Previous acculturation studies have indicated that one can infer and predict newcomers' levels of acculturation from the nature of their interpersonal communication networks (Kim, 1977; 1979). For example, an immigrant with a predominantly ethnic interpersonal network is less acculturated and probably less competent in the host communication system than someone who associates most often with members of the host society (Gudykunst and Kim, 1984). Those studies have failed to show us, however, the relationship between the degree of acculturation of the people with whom the newcomer interacts most often and the newcomer's level of acculturation.

¹ We acknowledge with gratitude the support of the U.S. National Science Foundation for our work on the network scale-up method (grant SBR-9710353).

On the other hand, the influence of social networks on the individual has been examined in studies of network analysis for years (Boissevain, 1974; Rogers & Kincaid, 1981). In their study of individual and network influences on the adoption of electronic messaging systems, Rice et al. (1990) found that an individual's decision to adopt an electronic messaging system was influenced by whether one's frequent communication contacts also use the system. They pointed out that "social influence is a theoretically more parsimonious explanation of individual attitudes and behaviors than are individual differences" (p.48). Likewise, Schmitz (1989) reported that the social influences of colleagues had a modest effect on both an individual's evaluation and use of electronic mail.

Based on their findings, it could be inferred that the degree of acculturation of the people with whom immigrants interact most often will have a strong influence on their own acculturation. To test this hypothesis, the present study employs this important network analysis concept, the social influence of alters on the ego, in the field of cross-cultural communication. Data were collected from a significant group of newcomers to the United States, international college students.

The study explores the relationship between the degree of perceived acculturation of the alters (i.e. foreign students' friends) and the ego (i.e. foreign students themselves), as well as influence of both ethnic-language media and English-language media. It is hoped that the application of social network concepts will help us better understand the acculturation process, and thus, serves both as an improvement and addition to the traditional approaches of interpersonal communication and acculturation behavior.

ACCULTURATION THEORIES

When people move from one culture to another (i.e. immigrants to other countries, foreign students to the U.S.), many aspects of life in the new society are unfamiliar to them, and they are faced with a high degree of uncertainty. Sooner or later, if they come to better understandings of the new environment, its people, its culture, and its society, they may become adjusted to the norms and values of the new society. This process of adaptive transformation is commonly called acculturation.

The idea of acculturation was first used by anthropologists. It was described by McGee (1898) as practical adjustment between groups. The formal adoption of acculturation as an area of scientific inquiry took place in the mid-1930s under the auspices of the Social Science Research Council. The Council appointed three distinguished anthropologists into a Subcommittee on Acculturation. According to Redfield, Linton, and Herkovits (1936), acculturation is a process of continuous first-hand contact between cultures with subsequent changes in original cultural patterns. Although they focused on the cultural change of ethnic groups, their definition has influenced the approach of subsequent studies on acculturation.

As summarized by Huang (1992), acculturation began to be adopted as an area of investigation in sociology, psychology, and social psychology after 1960. Sociologists have conceptualized acculturation as a "group" process of assimilation (Gordon, 1964, 1974) and have paid particular attention to the importance of inter-and intra-group relations to an individual's cultural adaptation. But their primary interests have been limited within the context of minority group and race relations. Psychologists and social psychologists have regarded acculturation as the adaptation of the perceptions, attitudes, and cognitions of the individual to the new cultural settings (Berry, 1980, 1988; Chance, 1965; Taft, 1963; Weinstock, 1964).

Acculturation is an interactive and continuous communication process through which strangers are socialized into the host culture by the identification and internalization of the significant symbols of the host society (Choi & Tamborini, 1988). It is "directed toward a greater compatibility with or 'fitness' into the host culture, and ultimately, toward assimilation (i.e. the highest degree of acculturation theoretically possible)." (Gudykunst & Kim, 1984, p.209)

However, is it possible for newcomers to accept some of the host cultural traits and still retain some of their ethnic cultural traits? Taylor & Simard (1975) indicate that the cost of acquiring something new is inevitably the losing of something old. Kim (1988) points out that the new cultural pattern may replace many of the old patterns little by little. Thus, acculturation could be thought of as falling along a continuum from "minimally acculturated" to "highly acculturated" (Padilla, 1980).

Likewise, an individual can experience different dimensions of acculturation in diverse ways. For instance, individuals can get used to listening and enjoying host culture music rather than ethnic music. On the other hand, they can still be accustomed to eating ethnic food rather than host culture's food. Or they might enjoy some kinds of host food and some kinds of ethnic food (Huang, 1992).

It should be noted that this study looked at acculturation rather than assimilation. Van den Berghe (1981) discussed the differences between these two concepts. He defined acculturation as those observable behaviors which people exhibit, such as language, religion, and ways of dress, while assimilation refers to the extent to which one distinct group loses its subjective identity and is absorbed into the social structure of another group. It is considered to be the highest degree of acculturation (Kim, 1986). In other words, acculturation is looked upon as a precondition of assimilation.

Both acculturation and assimilation could not take place without communication. Communication is crucial to acculturation. Only through communication with the new society and its members will newcomers develop insight into the new environment. Together with education, communication, as Mendelsohn (1964) pointed out, is regarded as fulfilling the task of “merging the minority groups into one democratic social organization of commonly shared ideas and values” (p.31).

To be more specific, as individuals move from one culture to another, behavioral modes and values they have learned in the old society may prove inadequate and mal-adaptive in the new society. To reduce the high degree of uncertainty and isolation, newcomers have to acquire social skills, ranging from language competence to driving ability, that are practiced and accepted in the new society. This learning could not take place without communication, either through intrapersonal, interpersonal, mass communication, or most commonly, combinations of those channels. Through communication, they may come to better understand social practices and cultural patterns of the host society.

Previous studies have examined various interacting factors in this complex process of acculturation. In general, those factors which influence individuals' degrees of acculturation include: host and ethnic interpersonal communication, host and ethnic media use, language proficiency, length of residence, and newcomers' demographic information.

In the early days, acculturation scholars focused more on the effects of interpersonal communication. For example, Redfield, Linton, & Herskovits (1936) pointed out that individuals reduced the intensity of isolation from the new society through social contacts with members of the host society.

Out-group members become acculturated primarily by participating in interpersonal communication with members of the in-group. Studies have shown that the more frequently one associates with the host people, the more easily one may adapt to the dominant society. Also, as Kim (1988) indicates, ties with host people would replace some of the ethnic ties, making the immigrant social network increasingly heterogeneous over time. Also, the degree of intimacy in the relationships developed with the in-group members is an important indicator of the degree of the immigrant's acculturation (Gudykunst & Kim, 1984).

In addition to host interpersonal communication, newcomers have access to individuals of the same national or ethnic origin. Because many newcomers initially lack host communication competence such as language, they tend to rely more on ethnic sources of support. Lazarus (1966) found that individuals who are insecure are likely to seek social support from their ethnic group. In their comparative study on acculturation of Hispanics and southeast Asians, Wong-Rieger & Quintana (1987) state that an extended kin group network fostered ethnic maintenance. Strong support networks, for example, the Vietnamese-American Association in Oklahoma City, also contributed to southeast Asians' ethnic maintenance.

Accordingly, the role of ethnic ties is regarded as interfering with the acculturation process (Anderson & Christies, 1978). In the long run, heavy reliance on ethnic communication would contribute to the sustenance of ethnic identity (Kim, 1988), and therefore, deter their acculturation. The longer newcomers avoid or only minimally interact with the host society, the longer it will take for them to become acculturated (Kim, 1988).

In general, previous studies of the role of interpersonal communication on newcomers' acculturation have agreed that newcomers who tend to seek interpersonal relationships with the in-group members in social situations have a greater potential of acculturation than those who do not, and they actually achieve a higher level of acculturation (James, 1961; Johnston, 1963; Ossenberg, 1964; and Graves, 1967).

Along with the development of interpersonal communication with in-group members, the use of host mass media has been related to acculturation. Newcomers were found to depend heavily on the mass media of the host society, particularly television, for information about language, norms, and behaviors in the new society (Kim, 1977; Won-Doornink, 1988). Shibutani & Kwan (1965) have indicated that “the extent to which members of a minority group become acculturated to the way of life of the dominant group depends upon the extent of their participation in the communication channels of their

rulers." (p. 573) The underlying assumption is that access to and use of mass media of the host society influences the process of learning about and taking part in the host society by immigrants (Subervi-Velez, 1986).

Many acculturation studies, for example, DeFleur & Cho (1957), Kim (1977), and Richmond (1969), have found that the host mass media play an important role in the acculturation process of immigrants. Mass media serve as agents to facilitate the adjustment of immigrants to daily life patterns such as food habits and language usage of the host society. Earlier researchers like DeFleur and Cho (1957) and Graves (1967) found that the use of television in the host society is positively related to the immigrants' acculturation. A more recent study by Won-Doornink (1988) also confirmed their findings. Among the Korean immigrants surveyed, those who watched relatively large amounts of American television were more highly acculturated to American society than those who watched high amounts of Korean language television.

On the other hand, the existence of ethnic mass media institutions has been seen as evidence of the persistence and distinctiveness of ethnic groups. It was found, however, that as newcomers become more familiar with the host language and culture, the level of interest in and use of ethnic media among newcomers decreases, while host media increases in popularity among newcomers (Kim, 1988). Likewise, Shoemaker, Reese, & Danielson's (1984) research on the Texas Hispanic population reported that the more acculturated immigrants are, the less they will use Hispanic mass media.

According to Shibutani & Kwan (1965), one of the main functions of the ethnic media is that they facilitate the development of consciousness of a kind by maintaining ethnic ties. Thus, ethnic media may serve as shields against some of the external pressures of acculturation (Subervi-Velez, 1986). In addition to these "protection" functions against assimilation, ethnic media also serve as vehicles for immigrants to learn about and accommodate to the host society. Ethnic media play a certain role in helping newcomers adapt themselves to the new culture. These media aid in the adjustment to the dominant society's way of life, while they slow down the assimilative process by maintaining traditional ties (Marzolf, 1979).

Previous studies have found that exposure to mass media with an information-oriented content (such as news items and documentaries) is particularly important in predicting immigrants' acculturation, as compared to exposure to mass media with content that is primarily entertainment-oriented (Gudykunst & Kim, 1986). This may help explain why the Korean American samples in Lee's (1984) study showed a relatively low level of acculturation. Respondents in Lee's study used American media for entertainment more than for information.

Finally, when compared with interpersonal communication, the overall acculturative function of mass communication is considered relatively limited (Kim, 1977; Kim, 1979). It has been shown that communication involving an interpersonal relationship provides newcomers with an intense and detailed influence over their acculturation. Similarly, the extent to which an immigrant participates in interpersonal communication in the host society tends to be positively related to his or her consumption of the host mass media (Kim, 1977).

In addition to interpersonal and mass communication variables, host language proficiency and length of residence have also received attention from acculturation scholars. In general, studies have found that a higher level of host language proficiency and longer residence time will lead to a higher degree of acculturation among newcomers (Subervi-Velez, 1984; Hur & Proudlove, 1982; Ryu, 1977). There are some problems with those studies though.

First, most research has focused on host language fluency, neglecting the fact that ethnic language fluency is also an important indicator. This is particular true among immigrants who have settled for a long time and second generation immigrants. Subervi-Velez (1984) employed both ethnic and host language abilities in his study of Hispanics' acculturation, and found an influence of both Hispanic and English language on the sample's acculturation.

Second, much of the literature has measured an individual's new language abilities to read, speak, write, or listen in a subjective way by self reports. For example, Barnett and Pollock (1983) used the Michigan Test of English Language Proficiency to test international students' English ability.

In examining residence time, it is questionable for a researcher not to take into account the subject's age. The effect of a five-year-stay in the U.S. should be much greater on a ten year-old child than on a forty-year-old adult. To solve this problem, Subervi-Velez (1984) suggests a more effective measure: the proportion of years in the U.S. (e.g. dividing the respondent's years of residency in the U.S. by his/her age).

The above literature review suggests that acculturation studies have been overwhelmingly focused on immigrants, an important subset of newcomers. Another significant subset of newcomers, international students in the U.S., have been left out of previous studies. The differences between foreign students and immigrants, such as motivations of coming to another country (i.e. foreign students come to another country for studying while immigrants come to make a living), intentions of staying in the new environment, length of residence (i.e. foreign students tend to stay in the U.S. for a shorter time than immigrants), and language ability (i.e. most foreign students have better host language skills than immigrants), should contribute to an empirical test of acculturation theories.

FOREIGN STUDENTS IN THE U. S.

The United States has long been a classroom to the world, educating many of the best students from other countries and absorbing many into this country. Foreign students form a visible and significant subset of the student body on most major U.S. college campuses.

During their stay in the U.S., foreign students are involved in the daily life and events of American society, being exposed to a culture which might be quite different from their own. They will leave the U.S. not only with diplomas but also with some understanding of American culture ranging from the form of government to sports, from television to food, and from business life to spiritual life. The impact of this period of American study on the lives of foreign students can be an important factor in the development of their native countries. It can also play a major part in future American relations with those countries.

Recognizing foreign students' importance in the world community, scholars have exhibited considerable interest in finding out what happens to foreign students during their stay in the U.S. Most studies concerning foreign students have been done on their adjustment behavior and attitudinal change. Many sociologists have tried to find how foreign students are socialized into American society by making an effort to learn what the most important factors are in explaining foreign students' adjustment behavior.

Research findings indicate that many factors contribute to foreign students' formation of attitudes and adaptation to the U.S. Among them are: pre-perceptions of America, motivation for study in the U.S., national background, geographical difference, home-country's U.S. relations, length of stay, media exposure, familiarity with the English language, and interpersonal contacts with Americans (Selltiz & Cook, 1962; Viswanath, 1988).

Generally speaking, the literature reveals that attitudes of foreign students toward the U.S. are positively related to the extent of their association with Americans (Klein, 1971; Chang, 1973). It has been argued that a foreign student with a favorable attitude toward the U.S. was more likely to have more contacts with Americans (Viswanath, 1988). On the whole, students who had more extensive and more intimate social relations with Americans seemed to adjust more easily and to enjoy their stay more than others (Selltiz et al. 1963; Morris, 1960).

In addition to interpersonal contacts with Americans, mass media researchers have become aware of the importance of the mass media as a socialization agent for foreign students. For example, Ryu (1976) found that several important variables such as English proficiency, length of residence, and degree of assimilative attitudes affected the media use behavior of foreign students. He found that high English proficiency is associated with high exposure to print media, while low English proficiency is associated with high exposure to television. As the length of residence increases, television is used more for news including news shows, public affairs and news documentaries. Furthermore, Mowlana and McLaughlin's study (1969) indicated that U.S. mass media are the major influence on foreign students' perceptions of and adaptation to the U.S.

On the contrary, Semlack's study (1979) indicated foreign media might affect foreign students' perceptions of U.S. leaders more than U.S. media. The data showed a strong association between foreign newspaper use and perceived reliability of U.S. political leaders and a moderate association between foreign newspaper use and perceived friendliness of U.S. political leaders. Likewise, Semlack (1979) concluded that foreign-originated media such as newspapers and short-wave radio might be the most important influence on foreign students' perception of U.S. political leaders and institutions.

Research findings on effects of media exposure on foreign students are not conclusive, however. For example, Markham (1967) found no strong evidence of mass media influence on foreign students' images of America. European students with

high media exposure tended to look upon Americans more favorably than those with less media exposure. Regarding attitude change, Markham found that low media users tended to develop more positive attitudes toward America than high users.

As we can see, the majority of studies of foreign students in the U.S. have been limited to descriptive aspects of their communication patterns. Research on attitude and communication using resident foreign students as subjects has overlooked the impact of the mass media variable in attitude formation and change. The results of this research have failed to provide insights into their acculturation behavior. More research needs to be done to find out how foreign students' communication behaviors, which include use of both ethnic and host mass media, and interpersonal communication with Americans and other foreign students, influence their American experiences and adaptation to the host society.

HYPOTHESES

An important concept which has not been clarified in previous studies is the causal relationship between acculturation of immigrants or foreign students and their use of host and ethnic media. Some studies indicated that the more acculturated newcomers are, the more they will use host media. Others pointed out that greater use of host media will lead to higher acculturation. Likewise, we don't know yet whether greater use of ethnic media would lead to less acculturation or whether less acculturated people use more ethnic media.

There is also some ambiguity regarding the role of interpersonal communication in the acculturation of newcomers -- in this case, the social influence of alters on the ego. Some studies have shown that more interaction with host people will lead to higher acculturation, while some indicate that higher acculturated people will have more communication with host people.

To address these issues, a new model was proposed (see Figure 1) to test relationships among foreign student's degree of acculturation (ego acculturation) and that of their friends (alter acculturation), their exposure to American media, exposure to ethnic media, and the number of years of residence in the U.S.

The following hypotheses are represented in the model:

- Hypothesis 1a: The longer foreign students have stayed in the U.S., the more they will be acculturated to the American society.
- Hypothesis 1b: The higher the degree of acculturation of foreign students' friends, the higher the acculturation degree of foreign students themselves.
- Hypothesis 2: The longer foreign students have stayed in the U.S., the higher the degree of acculturation of their friends.
- Hypothesis 3a: The longer foreign students have stayed in the U.S., the more they will use American media.
- Hypothesis 3b: The higher the degree of acculturation of foreign students' friends, the more foreign students will use American media.
- Hypothesis 3c: The higher the degree of acculturation of foreign students, the more they will use American media.
- Hypothesis 4a: The longer foreign students have stayed in the U.S., the less they will use media of their ethnic language.
- Hypothesis 4b: The higher the acculturation degree of foreign students' friends, the less foreign students will use media of their ethnic language.
- Hypothesis 4c: The higher the acculturation degree of foreign students, the less they will use media of their ethnic language.

These variables are conceived to fall into a causal order. As Grant et al. (1991) pointed out, "Structural equation modeling allows one to parcel out the components of correlation between two variables, distinguishing direct causal links from indirect and spurious links." (p.17) The foreign students' years of stay in the U.S. is treated as the only exogenous variable, which will affect all the endogenous variables, namely, ego's and alters' acculturation, and ego's host and ethnic media uses. These relationships are diagrammed in Figure 1 on the next page.

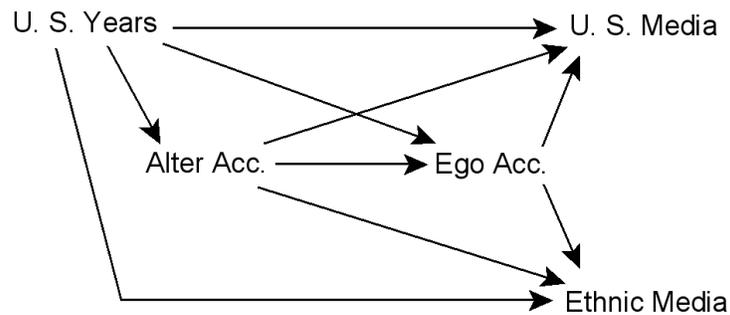


Figure 1. Hypothesized Model

METHODS

5.1 The Sample

To control one of the most important variables in the study of acculturation, namely, ethnicity, the largest single foreign student group in the campus was chosen. According to the *Chinese Student Directory of the University of Texas at Austin*, there are 487 Chinese students who came from Taiwan enrolled at the University in the Spring semester, 1990. Of these 487 students, 189 of them are doctoral students, 230 of them are working for a master's degree, and 68 of them are undergraduate students.

Previous studies have suggested that more interaction with the host people and longer residence time will likely lead to a higher degree of acculturation. Since Ph.D. programs require a longer residence time than master's programs, it is reasonable to assume that most doctoral students have stayed in the U.S. longer than most master's students. In the meantime, because most doctoral students are employed by the University, they should have more opportunities for interaction with American faculty members and students than master's students have. Furthermore, the draw of doctoral students controlled other demographic variables such as education, age, and income. Since the total population (i.e. 189 Ph.D students from Taiwan) was not big enough for random sampling, a census of the entire Taiwanese doctoral student's population was conducted. A two-page, self-administered questionnaire was sent to all 189 Taiwanese doctoral students enrolled on the campus.

5.2 Procedure

After the questionnaire was first formulated, it was pretested to test its clarity and ease of answering. After modification, the final version of the questionnaire was sent out by campus mail to the sample on April 13, 1990. Respondents were asked to complete the questionnaire and return it to the researcher using a campus mail envelope provided. After two weeks, 77 (41%) questionnaires were returned (one incomplete questionnaire was dropped from the analysis). The low response rate might be caused the failure of campus mail to reach the addressed person, many students do not check their mail regularly, and some departments do not have mailboxes for students. Another reason for the low response rate could be the fact that students were tied up by exams or papers in the final period of the semester.

SYSTAT and LISREL VI (Joreskog & Sorbom, 1986) were used to do the data analyses. Because of the small sample size and the exploratory nature of this research, the decision rule for hypothesis tests was set at $p < .10$. Although such a liberal decision rule can result in increased Type I error, the value of not dismissing weak but important relationships more than offsets the hazard of reporting a spurious relationship.

5.3 Measures

The questionnaire contained 11 questions. It began with a short introduction seeking the respondent's cooperation and promising confidentiality. To further increase the response rate, a brief, personal, Chinese-language message from the researcher was presented following the introduction.

In the first section, respondents were asked to report their mass media uses of both English-language and Chinese-language newspapers, television or VCR, and magazines on a five-point scale from "less than once a week" (1) to "more than once a day" (5). The mean for the American media use variable was 3.36 (standard deviation=.68), and the mean for the Chinese media use variable was 1.68(standard deviation=.49).

The results indicated that respondents used American media at a relatively high level compared to the Chinese media. Among the American mass media, television was used most often by the respondents (mean 4.03, standard deviation=.85), followed by newspaper (mean 3.53, standard deviation=.98), and magazine(mean 2.53, standard deviation=.1..5). Among the Chinese mass media, newspaper was used most often by the respondents (mean 2.66, standard deviation=.1.15), followed by magazine (mean 1.26, standard deviation=.59), and television and VCR (mean 1.11, standard deviation=.53). These differences may be attributed to the availability of American media over Chinese media.

To determine the influence of alter's degree of acculturation on ego, respondents were asked to list five persons with whom they communicate most often. The number of alters chosen was based Schmitz's (1989) suggestion. In his study, Schmitz decided to choose five alters as a compromise between the "three or more, and eight or less alters" suggested by Burt (1984). The present study followed

For each of the five contacts named, respondents were asked to give their subjective perceptions concerning five characteristics: personal relations with Americans, personal relations with Chinese, experiences of staying in U.S., English fluency in general, and social activities with Americans. Respondents were requested to answer each question on a five-point scale ranging from poor (1) to good (5). If a respondent listed and rated all five persons, the "perceived acculturation of alters" score was calculated by adding up all the answers and dividing by five. For those respondents who did not list all of the five persons, we decided to keep their answers by averaging the scores of the actual number of persons listed.

While adding up the scores, answers on the personal relations with Chinese were reversed (i.e. a answer of 5 was converted to 1, a answer of 4 was converted to 2, etc). It was assumed that a good relation with Chinese friends will have a negative effect on their degree of acculturation, while a good relation with American will have a positive effect on their acculturation. The mean for the alter's degree of acculturation was 3.50 (standard deviation=.47; alpha value for reliability test= .85), which suggested that respondents thought those people with whom they communicate most often have acculturated to the American society to some degree.

The same five items used to measure the friends' acculturation were then used again to measure the respondent's degrees of acculturation. The only difference was in the respondents' self-description of English language ability. The ego's English language ability was determined by asking respondents to rate their English speaking, writing, and reading abilities on a five-point scale ranging from poor (1) to excellent (5). Ratings on these three categories were added up and averaged to get a total score.

Acculturation of ego was measured by averaging respondents' answers on a five-point scale about the following questions: how do they rate their personal relations with Americans and Chinese, how do they like their stay in the U.S., how do they describe their English fluency, and how often do they go to social activities with Americans. These measures are basically the same as those of their friends' acculturation. The mean for the ego acculturation was 3.23 (standard deviation=.43).

Finally, some demographic data was collected, i.e. respondents' names, major, and length of residence in the U.S. The mean for ego's English ability was 3.50 (standard deviation=.57). In terms of length of residence in the U.S., an open-ended question asking how many years they had been in the U.S. was used. Results showed that, on average, respondents have been in the U.S. for 4.59 (standard deviation=2.28) years.

After answering the questionnaire, respondents were requested to mail the questionnaire back to the researchers through the campus mail system.

RESULTS

6.1 Analysis of the Model

Correlations among the variables and means and standard deviations for each variable are reported in Table 1.

Table 1. Pearson Correlation Matrix

	EGO-ACC	AM-USE	CHI-USE	ALTER-ACC	US-YEAR
EGO-ACC	1.000				
AM-USE	0.184*	1.000			
CHI-USE	-0.057	-0.228**	1.000		
ALTER-ACC	0.283**	0.344***	-0.389***	1.000	
US-YEAR	0.195*	0.208**	-0.071	0.163*	1.000

* p< .10
 ** p< .05
 *** p< .01

	<u>Mean</u>	<u>Standard Deviation</u>
American Media Use	3.36	.68
Chinese Media Use	1.68	.49
Alter Acculturation	3.50	.47
Ego Acculturation	3.23	.43
Us Residence Year	4.59	2.28

The structural equation model was analyzed using LISREL VI (Joreskog & Sorbom, 1986) . According to Monge, Edwards, & Kirste (1983), this tool provides both simultaneous analysis of each of the hypothesized relationships, and a measure of the overall fit of the model to the data. The model diagrammed in Figure 1 was tested first. Non-significant links were then dropped from the model. Results of the LISREL analysis are presented in Table 2.

Table 2
Results of LISREL Analysis

#	Hypothesis		Hypothesized Model	Final Model
	From	To		
1a	US Residence Year	Ego Acculturation	.153*	.153*
1b	Alter Acculturation	Ego Acculturation	.258**	.258**
2	US Residence Year	Alter Acculturation	.163*	.163*
3a	US Residence Year	American Media Use	.145*	.156*
3b	Alter Acculturation	American Media Use	.300***	.319***
3c	Ego Acculturation	American Media Use	.071	- - -
4a	US Residence Year	Chinese Media Use	-.017	- - -
4b	Alter Acculturation	Chinese Media Use	-.403***	-.389**
4c	Ego Acculturation	Chinese Media Use	.060	- - -

Error Terms:

Alter Acculturation	.973	.973
Ego Acculturation	.897	.897
American Media Use	.853	.858
Chinese media Use	.845	.849

Overall Model:

Coef. of Determination	.073	.076
Chi-square	.950	1.630
degrees of freedom	1.000	4.000
p-value	.328	.804
Adj. Goodness of Fit	.922	.969

The final model of the LISREL analysis is presented in Figure 2. Hypothesis 1a, in which a positive relationship between residence time in the U.S. and foreign students' acculturation was predicted was supported ($b=.153$; T value= 1.325, $p< .10$). Hypothesis 1b, predicting a positive relationships between the acculturation degree of foreign students' friends and the acculturation degree of foreign students themselves was supported ($b=.258$; T value= 2.281, $p< .05$). From the beta values, it appears that the alters' influence on the ego's acculturation is greater than the influence of the ego's length of residence in the U.S.. This finding demonstrates the importance of social networks in individuals' acculturation processes.

Hypothesis 2, predicting a positive relationship between foreign students' length of stay in the U.S. and the acculturation degree of their friends, received support from the analysis ($b=.163$; T value= 1.402, $p< .10$). Hypothesis 3a, predicting a positive relationship between foreign students' length of residence in the U.S. and their use of American media was supported ($b=.156$; T value= 1.411, $p< .10$). However, Hypothesis 4a, predicting a similar relationship between time spent in the U.S. and the use of ethnic language media, was not supported.

Predictions in Hypothesis 3b, and 4b, that the acculturation degree of foreign students' friends would lead to more use of American media and less use of ethnic language media received strong support ($b=.319$, T value= 2.879, $p< .01$ & $b= -.389$, T value= - 3.583, $p< .01$, respectively). No support was observed for both Hypothesis 3c and 4c on the relationships between foreign students' acculturation and their American and ethnic media use.

Overall, the final model is a good fit to the data. ($\text{Chi-squared}= 1.63$, $d.f.= 4$, $p= 0.804$). The adjusted goodness of fit index is .969 and the root mean square residual is .032.

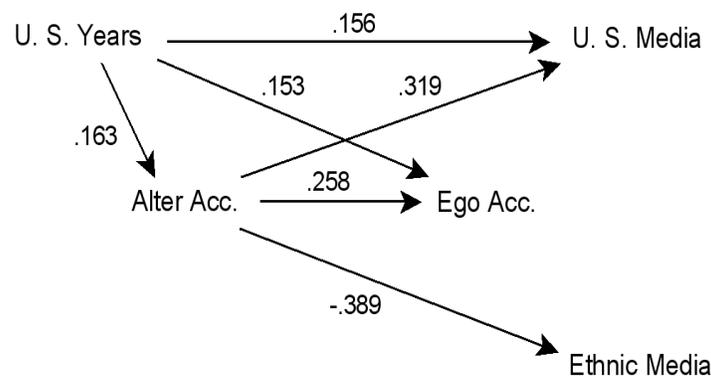


Figure 2. Final Model

CONCLUSION

The results indicate that the degree of acculturation of those in an individual's immediate network plays a central role in the pattern of relationships. Although the results are different from previous studies, they show that the application of social network concepts helps us to understand the acculturation process, and thus, serves both as an improvement and addition to the traditional approaches of interpersonal communication and acculturation behavior.

The most central variable in this model was alters' acculturation, which was predicted by the length of ego's residence time in the U.S., and in turn, predicted ego's acculturation into the host society, ego's American media exposure and ego's ethnic-language media use. Once again, the influential impacts of an individual's ego network on the person's values and behaviors was demonstrated. Furthermore, the data analysis showed that acculturation of alters has more influence on ego's acculturation than ego's own length of residence in the U.S.. It could be argued that, as newcomers stay longer in the host society, they will interact more and more with people of the host society or higher acculturated ethnic people, and this high acculturated social network will reinforce ego's degree of acculturation.

Moreover, it was found that there is a positive relationship between the respondents' use of American media and degree of friends' acculturation, and also a negative relationship between the respondents' use of Chinese media and degree of friends' acculturation. The higher their friends' degree of acculturation, the more ego is exposed to American mass media, and the less ego uses ethnic media.

In other words, the data indicate that ego's acculturation has no direct connection with any type of media use. Instead, it suggests that both acculturation and media use are the product of the people with whom a foreign student chooses to associate during their stay in the U.S. This relationship, while unexpected, makes a great deal of sense, in that most knowledge of available media for foreign students just entering the U.S. will come from those with whom they interact most frequently. If the alters are well-accultured, they are more likely to communicate about and/or introduce American media, whereas non-accultured alters will be the best sources of information regarding the availability of Chinese-language media in the U.S.

However, the limited functions of mass media in an individual's acculturation process found in this study could be attributed to the very low availability of the ethnic media in the community and the fact that most graduate students have a heavy academic burden, leaving them with little time to consume mass media of either English- or Chinese- language. It is also true that some foreign students don't have a television set of their own or they share one with their roommates. It is expected that further research on newcomers in different communities (e.g., Asian immigrants in Los Angeles) would find a more significant role of mass media in their acculturation processes.

The present study has introduced an important concept in the study of the foreign sojourner's acculturation processes. By studying the alters' impacts on ego, we will be able to get a better picture of the acculturation processes. The persons with whom we communicate most often, and those who communicate with us, will exert a certain degree of influence on our understanding of the society. For those coming from an outside society, the alters' influences should be even more stronger. It has also suggested that, in future studies, identification of alters should include both in-group and out-group members. In some cases, the influences from the same out-group members are much stronger than those from the in-group members because they can communicate more effectively.

Furthermore, since the data represented each respondent's subjective perceptions of alters' degree of acculturation, the alters' influences should be extended beyond the behavior level to the value level. Since people tend to be associated with the "similar" people, the psychological perception of the alters' acculturation could be used as one of the indicators of the ego's acculturation.

It should be noted, however, that the measure of social network influence was obtained at the dyad level. As Schmitz (1989) pointed out, "the social environment consists of more numerous and more indirect influences at the group level" (p.25). Future studies should endeavor to go beyond the dyad level. Also, the five-person-limit on the ego's network masks any effects of different network sizes, as well as the influence of "weak links."

Another limit of the present study lies in its employment of ego's subjective reports of alters' acculturation. It would be better to have a census of a group so that alters' acculturation scores could be taken from their own responses rather than the ego's self-perception. It would also be helpful to survey international college students of other nationalities in different campuses. Hopefully, this application of social network research would extend our knowledge on newcomers' acculturation processes.

Finally, the small sample size and the low response rate of the present study suggest the use of caution in interpreting these findings. These results also are not necessarily generalizable to all international college students. As a pilot study, however, the findings are exciting and help provide insights into the acculturation process, suggesting a new perspective for future studies.

REFERENCES

- Anderson, G.M. & Christies, T.L. (1978) Ethnic Network: North American perspective. *Connections*, 2 (1): 25-34.
- Berry, J.W. (1980) Acculturation as varieties of adaptation. (pp.9-26) In Amado M. Padilla (ed.), *Acculturation: Theory, Models and Some New Findings*. Boulder: Westview Press.
- Berry, J. W. (1988) Cognitive and social factors in psychological adaptation to acculturation among the James Bay Cree. (pp.111-142). In G. K. Verma and C. Bagley (Eds.), *Cross-cultural Studies of Personality, Attitudes and Cognition*, Hong Kong: Macmillian press.
- Boissevain, J. (1974) *Friends of Friends: Networks, Manipulations and Coalitions*. Basil Blackwell: Oxford, UK.
- Chang, H.B. (1973). Attitudes of Chinese students in the U.S. *Sociology and Social Research*, 58: 66-77.
- Choi, J. & Tamborini, R. (1988) Communication-acculturation and the cultivation hypothesis: a comparative study between two Korean communities in the U.S. *Howard journal of Communication*, Spring, 1988, pp.57-74.
- DeFluer, M. & Cho, C. (1957). Assimilation of Japanese-born women in an American city. *Social Problems*, 4: 244-257.
- DeFleur, M. L. & Ball-Rokeach S. J. (1982). *Theories of Mass Communication* (4th ed.). New York: Longman.
- Gordon, M.M. (1964) *Assimilation in American Life*, New York: Oxford University Press.
- Gordon, M.M. (1974) Mass Media and Minority Socialization: Conceptualizing the Process. Paper presented at the annual meeting of the Association for Education in Journalism, San Diego, CA.
- Grant, A. E. , Guthrie, K. K., and Ball-Rokeach, S. J. (1991) Television Shopping: A Media Dependency Perspective. *Communication Research*, 18(6): 773-798.
- Graves, T. (1967) Acculturation, access and alcohol in a tri-ethnic community. *American Anthropologist*, 69(3-4):306-321.
- Gudykunst, W. B. & Kim, Y. Y. (1984) *Communicating with Strangers*. New York: Random House.
- Gudykunst, W. B. (1986) *Intergroup Communication*, Beverly Hills, CA: Sage.
- Gudykunst, W. B. , Tim-Toomey, S. & Chua, E. (1988) *Cultural and Interpersonal Communication*, Beverly Hills, CA: Sage.
- Herskovits, M. (1955) *Cultural Anthropology*, New York: Knopf.
- Huang, W. (1992) *Attributional Confidence, Media Use, and Adaptation*. Unpublished Dissertation, University of Texas at Austin.
- Hur, K. K. & Proudlove (1982) The Media behavior of Asian Americans. Paper presented to the Minorities Communication Division, The Association for Education in Journalism and Mass Communication, Annual Convention, Athens, Ohio.
- James, B.J. (1961) Social-psychological dimensions of Ojibwa acculturation, *American Anthropologists*, 721-746.
- Johnston, R. (1963) New approach to the meaning of assimilation. *Human Relations*, 295-298.
- Joreskog, K. G. & Sorbom, D (1986) *Lisrel VI Manual*.
- Kim, Y.Y. (1977) *Communication Patterns of Foreign Immigrants in the Process of Acculturation*. Ph.D Dissertation, Northwestern University.
- Kim, Y.Y. (1979) Toward an interactive theory of communication-acculturation. in D. Nimmo(ed.), *Communication Yearbook 3*. New Brunswick, N.J.: Transaction.
- Kim, Y.Y. (1981) Intercultural communication in the context of immigrant acculturation. Presented to the International Communication Association, Minneapolis, MN.
- Kim, Y.Y. (1984) Searching for creative integration. in W. B. Gudykunst and Y.Y. Kim (eds.) *Methods for Intercultural Communication Research*. Beverly Hills, CA: Sage.
- Kim, Y.Y. (1988) *Communication and Cross-Cultural Adaptation*. Clevedon, UK: Multilingual Matters Ltd.

- Klein, M. H. (1971). The foreign student adaptation program: social experiences of Asian students in the U.S. *International Education and Cultural Exchange*, 6: 77-90.
- Lazarus, R.S. (1966) *Psychological Stress and Group Process*. St. Louis, MO: McGraw Hill.
- Marden, C.F. & Meyer, G. (1968) *Minorities in American Society*. 3rd ed. New York: Van Norstrand.
- Markham, J. (1967) *International Images and Mass Communication Behavior: A Five Year Study of foreign Students* . Iowa City: Mass communication Research Bureau, University of Iowa.
- Marzolf, M. T. (1979) *The Danish-language Press in America*. New York: Arno Press.
- McGee, W. J. (1898) Piratical acculturation. *American Anthropologists*, XI: 243.
- Mendelsohn, H. (1964) Sociological perspectives on the study of mass communication. in L.A. Dexter, and D.M. White (eds.) *People, Society and Mass Communications*, New York: Free Press.
- Monge, P.R., Edwards, J. A. & Kirste, K. K. (1983). Determinants of network involvement: connectedness and integration. *Group and Organization Studies*, 8(1): 83-111.
- Morris, R.T. (1960) *The Two-way Mirror*. Minneapolis: University of Minnesota Press.
- Mowlana, H. & McLaughlin, G. W. (1969). Some variables interacting with media exposure among foreign students. *Sociology and Social Research*, 53: 511-522.
- Nagata, K. (1969) *A statistical approach to the study of acculturation of an ethnic group based on communication-oriented variables: the case of Japanese Americans in Chicago*. Ph. D. dissertation, University of Illinois- Urbana-Champaign.
- Ossenberg, R.J. (1964) The social integration and adjustment of postwar immigrants in Montreal and Toronto. *Canadian Review of Sociology and Anthropology*, 202-214.
- Padilla, A. Introduction. in A. Padilla (ed.), *Acculturation*. Boulder, Colo: Westview Press.
- Redfield, R., Linton, R. & Herskovits, M. (1936) Memorandum for the study of acculturation. *American Anthropologists*, XXXVIII, 149-150.
- Richmond, A. (1969) *Post-war Immigrants in Canada*. Toronto: University of Toronto Press.
- Rice, R.E., Grant, A.E., Schmitz, J. & Torobin, J. (1990) Individual and network influences on the adoption and perceived outcomes of electronic messaging. *Social Networks*, 12: 27-55.
- Rogers, E. & Kincaid, D.L. (1981) *Communication Networks: Toward a New Paradigm for Research*. New York: the Free Press.
- Ryu, J. S. (1976). New-socialization function of mass media working among foreign students. Paper presented at the Western States Speech Communication Association convention, San Francisco, November, 1976.
- Ryu, J.S. (1977) *The Mass Media and the Assimilation Process: a Study of Media Use by Korean Immigrants*. Unpublished doctoral dissertation, University of Oregon.
- Schmitz, J. (1989) Social influences and electronic communication in organizations. Paper presented to the CORS/TIMS/ORSA, May, 1989.
- Selltiz, C. & Cook, S. W. (1962). Factors influencing attitudes of foreign students toward the host country. *Journal of Social Issues*, 18: 7-23.
- Semlack, W. K. (1979). Effects of media use on foreign students' perceptions of U.S. political leaders. *Journalism Quarterly*, 56: 153-156.
- Seyfi, H. (1979). *United States mass media and foreign students: exposure, uses and effects*. Unpublished master's thesis. Iowa State University, Ames Iowa.
- Shibutani, T. & Kwan, L. (1965) *Ethnic Stratification: a Comparative Approach*. New York: Macmillan.

- Shoemaker, P. , W.A. Danielson, and S.D. Reese(1984) Language and media among Hispanics and Anglos. Presented to the Association for Education in Journalism and Mass Communication, Gainesville, FL.
- Subervi-Velez, F.(1986) The mass media and ethnic assimilation and pluralism. *Communication Research*, 71-96.
- Subervi-Velez, F.(1984) *Hispanics, the Mass Media and Politics: Assimilation vs. Pluralism* . Unpublished Doctoral dissertation, University of Wisconsin-Madison.
- Taft, R. (1963) The assimilation orientation of immigrants and Australians. *Human Relations*, 16: 279-293.
- Taylor, D.M. & Simard, L.M. (1975) Social interaction in a bilingual setting. *Canadian Psychological Review*, 16(4): 240-254.
- Van den Berghe, P. (1981) *The Ethnic Phenomenon*, New York.
- Viswanath, K. (1988) International news in U.S. media: perceptions of foreign students. *Journalism Quarterly*, 65(4): 952-959.
- Weinstock, S.A. (1964) Some factors that retard or accelerate the rate of acculturation: with specific reference to Hungarian immigrants. *Human Relations*, 17: 321-340.
- Wittke, C. F. (1957) *The German Language Press in America*. Lexington: University of Kentucky Press.
- Won-Doornink, My J. (1988) Television viewing and acculturation of Korean immigrants. *Amerasia* 14(1): 79-92.
- Wong-Rieger, D. & Quintana, D. (1987) Comparative acculturation of southeast Asian and Hispanic immigrants and sojourners. *Journal of Cross-Cultural Psychology*, 18(3): 345-362.