The Relationship of Cultural Similarity, Communication Effectiveness and Uncertainty Reduction.

To investigate the relationship of cultural similarity/dissimilarity, communication effectiveness, and communication variables associated with uncertainty reduction theory, a study examined two groups of students—a multinational group living on an "international floor" in a dormitory at a state university and an unrelated group of U.S. students living in another dormitory. Subjects, nine pairs of intercultural roommates and eight pairs of culturally homogeneous roommates, completed questionnaires which were distributed at floor meetings three weeks before the end of the semester. Communication effectiveness was measured by a global item ("My roommate is an effective communicator") embedded within the questionnaire, and by a modified version of B. D. Ruben's nine behavioral scales for the assessment of intercultural communication effectiveness. Results showed no significant difference in the communication between culturally similar and dissimilar roommates. Findings also indicated that communication effectiveness had an independent effect on four variables—disclosure, attitude similarity, interpersonal attraction, and attributional confidence. The hypothesis predicting an interaction effect between cultural similarity and communication effectiveness was not supported. (Thirty-nine references are appended.) (MM)
THE RELATIONSHIP OF CULTURAL SIMILARITY, COMMUNICATION EFFECTIVENESS AND UNCERTAINTY REDUCTION

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ABSTRACT

The purpose of this study was to investigate the relationship of cultural similarity/dissimilarity, communication effectiveness and communication variables associated with uncertainty reduction theory. The subjects were a multinational group of students living on an "international floor" in a dormitory at a state university and an unrelated group of U.S. students living in another dormitory. Multivariate analysis of variance was used to test the relationship of cultural similarity of roommates and communication effectiveness of roommates on self-disclosure, interrogation, deception detection, attraction, attitude similarity, shared communication networks, and attributional confidence. Results indicate that communication effectiveness had a significant multivariate effect on the dependent measures. Cultural similarity produced no effect; nor was there an interaction effect between cultural similarity and communication effectiveness. The findings suggest that degree of communication effectiveness and stableness of the roommate relationship are more important predictors of communication than is the intra- or intercultural nature of the roommate pair.
Despite the increasing interest in studying intercultural communication, a common criticism levied against this research is that scholars rarely focus on intercultural communication itself. If intercultural communication "refers to the communication phenomena in which participants, different in cultural backgrounds, come into direct or indirect contact with one another, (Kim, 1984, p. 16) then, as Kim (1984) argues "...it is apparent that, in the past, the bulk of energy and time of intercultural communication researchers has been directed toward 'intracultural' or 'cross-cultural' rather than 'intercultural' studies of communication (p. 16)."

The purpose of this study is to investigate communication between individuals from different cultural backgrounds. More specifically, the research is directed at determining what, if any, differences characterize communication between individuals of culturally similar and dissimilar backgrounds. In addition, the study explores the impact of communication effectiveness on these intracultural and intercultural communication interactions.

BACKGROUND

Human communication has been studied by looking at literally hundreds of different constructs and variables. The constructs studied in this research were selected based on three concerns: first, the importance of grounding the research within a theoretical framework so that both predictions and results could be interpreted within the context of a theory and an ongoing line of research; second, the selection of variables important to the communication context in which culturally similar and dissimilar
individuals interact; and third, the use of measurement instruments with demonstrated validity and reliability when used by subjects other than North American majority cultural members.

The Nature of Intercultural Communication

As Kim’s statement above suggests, definitions of intercultural communication usually emphasize the impact of divergent cultural backgrounds on the communication process. Intercultural communication scholars generally argue that the process of communication is the same interculturally, but because of differences in "key variables" (Sarbaugh, p. 12), which represent heterogeneity in the participants, the communication becomes intercultural.

Authors of intercultural communication textbooks generally define these key variables as value orientations or cultural patterns, perception, verbal and nonverbal codes, and context. The specific label and emphasis may vary from author to author; nevertheless, most writers consider these as the key distinguishing variables. (See for example, Condon and Yousef, 1975; Gudykunst & Kim, 1984; Samovar, Porter & Jain, 1983; Sarbaugh, 1979).

The assumption is that cultural heterogeneity in these key variables produces communication substantively different from communication between individuals of culturally similar backgrounds. Our purpose then was to test this assumption by mapping differences that characterize the communication between individuals of culturally similar and dissimilar backgrounds.
Uncertainty Reduction Theory in Intercultural Communication

Uncertainty reduction theory, first introduced by Berger and Calabrese (1975) to explain and predict communication in initial interactions, has been extended by Gudykunst and his associates. In a series of studies, Gudykunst has investigated the applicability of uncertainty reduction in both cross-cultural tests of the theory (Gudykunst, 1983a; Gudykunst & Nishida, 1984; Gudykunst, Yang, & Nishida, 1985; Gudykunst & Nishida, in press) and intercultural tests (Gudykunst, 1983b; Gudykunst 1985b; Gudykunst, Nishida, Koike, & Shiino, 1986) by applying its theorems and axioms to communication between individuals from different cultures. Gudykunst’s work has also tested the theory by investigating its applicability to more established relationships (Gudykunst, 1985).

The present investigation of cultural similarity and communication effectiveness is grounded in uncertainty reduction theory. The study serves as both a replication and an extension of the previous research. The theory is appropriate because it applies to dyadic interaction that begins with the interactants as strangers and predicts development of communication as their relationship changes. This description fits the communication context in which we investigated culturally similar and dissimilar communication--roommate communication in a university residence hall setting. Basing this study in the prior research on uncertainty reduction provides the additional advantage of using instruments proven reliable in measuring intercultural communication.

Positing that individuals would seek to reduce uncertainty
(or increase predictability), Berger and Calabrese proposed a theory stipulating relationships between similarity, information seeking, attraction, nonverbal affiliativeness and uncertainty reduction (1975). Berger and various associates extended and explicated aspects of the theory in additional pieces of work (Berger, 1979; Berger and Bradec, 1982; Berger & Douglass, 1981; Berger and Perkins, 1978; Clatterbuck, 1979). Gudykunst has tested the generalizability of the uncertainty reduction theory by applying it to communication in different cultures.

The most thorough cross-cultural test of the theory was conducted by Gudykunst, Yang, and Mishida (1985) as they applied the theory to communication between acquaintances, friends, and those in dating relationships in Korea, Japan and the United States. They concluded that "the model developed and tested appears to be a reasonable fit to the self-report on communication in acquaintance, friend, and dating relationships" (p. 447-448) in the three countries. Gudykunst and Mishida (in press HCR) study attributional confidence in Japan and the United States to develop a measure of attributional confidence applicable in both high- and low-context cultures (Hall, 1976).

Of particular interest to the present study are those applications of uncertainty reduction to intercultural communication. Gudykunst and Mishida (1984) tested the theory in Japan and the United States using Byrne's (1961) bogus stranger method and studied how attitude similarity, cultural similarity, culture, and self-monitoring influence the selection of uncertainty reduction strategies, attributional confidence,
attraction and nonverbal affiliativeness. Subjects were asked to describe their behavior when introduced to a stranger from Japan or the United States and with similar or dissimilar attitudes. Results indicated that cultural similarity or dissimilarity influenced the choice of uncertainty reduction strategies as did attitude similarity/dissimilarity. The culture of the subjects (Japanese or U.S.) also produced difference in the choices of uncertainty reduction strategies.

In another study Gudykunst (1965b) reported the application of uncertainty reduction to developed relationships and investigated the influence of cultural similarity, type of relationship and attributional confidence, self-disclosure, interrogation, deception detection, attraction, perceived attitude similarity, and shared communication networks with self-monitoring as a covariate. Student subjects were asked to select a person who was culturally similar or dissimilar, and either a same-sex acquaintance or friend, and then answer questions which characterized their communication with that person. Gudykunst predicted that self-monitoring would influence the dependent measures. He also predicted that degree of cultural similarity and type of relationship would influence the dependent measures and that there would be an interaction effect between the degree of cultural similarity and type of relationships. Results supported his hypotheses; most salient for this research, he found cultural similarity had a significant multivariate effect on the set of dependent variables. The univariate analysis indicated cultural similarity had an independent effect on two variables: attraction and shared communication networks. He
found not only a significant multivariate effect for type of relationship, but also significant independent effects on each of the dependent variables.

Both of these studies suggest that communication, as measured by self-disclosure, interrogation, deception detection, attraction, attitude similarity, and shared communication networks would differ in culturally similar and dissimilar roommate pairs. Therefore, the following hypothesis was tested:

H1: Cultural similarity between roommate pairs influences their self-disclosure, willingness to interrogate, deception detection, attraction, attitude similarity and shared communication networks.

Communication Effectiveness

Communication competence has been studied by both the general and intercultural communication scholar. In communication generally, important studies of communication competence have been done by Wimmer (1977), McCroskey (1982), Spitzberg (1983), Spitzberg & Cupach (1984), and Rubin (1985).

Among those interested in intercultural communication, a great deal of attention has been given to the study of competence in communicating interculturally, usually under the label of intercultural effectiveness. Dinges (1983) argued that, in general, efforts have centered on theoretical formulations and less has been accomplished through empirical testing. There have been a number of approaches to conceptualizing and measuring intercultural communication effectiveness. One approach has been psychosocial in nature and investigates the characteristics of
the person who is able to function effectively in other cultures (Adler, 1974; Bochner, 1973, Cleveland and Mangione, 1960). A subset of this approach developed a "third culture" perspective in which individuals from unique cultural backgrounds interact within a third culture, different from that of either participant. Gudykunst, Wiseman, & Hammer (1977) investigated individual qualities including empathy, perceptual accuracy, non-judgmentalness, lack of ethnocentrism, open-mindedness, relationship-building skills, and astute non-critical observation. Hammer, Gudykunst and Wiseman (1978) found support for this third-culture approach to effectiveness by specifying variables associated with effective functioning in another culture.

Departing from these approaches, Ruben and his associates (Ruben, 1976; Ruben, Askling & Kealey, 1977; Ruben & Kealey, 1979; Kealey & Ruben, 1983; Ruben, 1985) argued for studying behavioral components of effective intercultural communication. Ruben (1976) identified seven behavioral dimensions of intercultural communication competency, including display of respect, interaction posture, empathy, interaction management, orientation to knowledge, self-oriented role behavior, and tolerance for ambiguity. Ruben developed nine scales tapping these seven dimensions for use by trained observers who evaluated the behavior of individuals being trained for assignment in an intercultural setting.

All of these approaches to intercultural communication effectiveness argue that, with competence, the intercultural
interactants have a greater probability of understanding each other. In other words, the differences produced by the culturally dissimilar backgrounds of the participants is minimized by the communication competence of the communicators themselves. Based on this assumption, the following hypothesis is tested:

H2: Communication effectiveness influences attributional confidence, self-disclosure, interrogation, deception detection, attraction, perceived attitude similarity and shared communication networks.

Because culture is generally seen as a very powerful and enduring influence on an individual, even skill in communicating interculturally should not completely negate the impact of cultural differences on communication. Adler (1977), for example, in describing multi-cultural people, who are adaptive and can interact effectively regardless of the cultural setting, argued that all people are, to some extent, bound by their culture. Therefore, the following hypothesis is tested:

H3: There will be a significant interaction effect between cultural similarity and communication effectiveness on attributional confidence, self-disclosure, interrogation, deception detection, perceived attitude similarity, and shared communication networks.

METHOD

This research is part of an ongoing study investigating communication differences between intercultural and intracultural roommate pairs. A modified version of the original Ruben
intercultural communication effectiveness scales, as well as measures of attributional confidence, self-disclosure, interrogation, deception detection, attraction, perceived attitude similarity, and shared communication networks were used.

**Subjects**

Participants in the study were students living in a residence hall at a large western university. In Fall, 1985 the Director of Residence Halls designated an "International Floor" in one of the dormitories. International floor residents were recruited during the previous spring with a letter of invitation to incoming students from the United States and existing residents of all nationalities. Incoming international students were assigned to the floor, as were all American students indicating an interest in the program. A small group of U.S. students who were not program participants also resided on the floor, as they had been allocated rooms prior to the establishment of the international floor.

Of 54 students on the international floor, 44 participated in the study. The research reported here is based on responses from the nine pairs of culturally heterogeneous (n = 18) or intercultural pairs and from 8 culturally homogeneous pairs (n = 16) from a floor in a different dormitory. Other participants included 9 roommate pairs (n = 9) from the U.S. living on the intercultural floor and 4 roommate pairs (n = 8) of culturally homogeneous roommates from countries other than the United States.
Communication effectiveness was measured by a global item "My roommate is an effective communicator" embedded within the questionnaire and by a modified version of the nine behavioral scales for the assessment of intercultural communication effectiveness described by Ruben (1976). In both instances, responses were measured on a Likert-type continuum, ranging from 1-7 for the global measure and 1 to 4 or 1 to 5 for the Ruben scales. Roommates acted as peer observers of each other's communication effectiveness.

Although the Ruben scales were originally intended for use with trained observers, it has been shown that assessments by peer observers (in this instance, roommates) made using a modified version of these scales are highly reliable (Koester & Olebe, 1986). The modifications in the scales are primarily related to avoidance of technical language, elimination of redundancies, and simplification of vocabulary and sentence structure. Using the same sample under consideration here, Koester & Olebe (1986) found a strong correlation between the global measure of communication effectiveness and the total Ruben score (r = .70, p = .000). (The total Ruben score is obtained by summing the responses to the individual scales.) Cronbach's alpha for the Ruben scales was .766. In addition, the dimensions of intercultural communication competency most strongly identified with effectiveness, respect, task roles, and interaction management, as revealed by the observations of trained professionals (Ruben 1976), were also found in the results of the peer observers. The conclusions of the previous
study support that the global measure is a reliable and valid measure for peer judgments of communication effectiveness and therefore, measures the independent variable of communication effectiveness in this study.

**Design**

A 2 x 2 (communication effectiveness by cultural similarity) multivariate analysis of variance design was used to test the three hypotheses. Intercultural roommate pairs and U.S. roommate pairs from the control floor were divided into two groups of communication effectiveness. Those scoring above and below the mean on the global measure of effectiveness constituted the two groups respectively. This resulted in four conditions: 1) subjects with culturally dissimilar roommates who saw their roommates as high in communication effectiveness; 2) those with culturally dissimilar roommates who judged their roommates low in communication effectiveness; 3) subjects with culturally similar roommates who saw their roommates as high in communication effectiveness; and 4) those with culturally similar roommates who judged their roommates low in communication effectiveness.

**Measurement of Dependent Variables**

The dependent variables, attributional confidence, self-disclosure, interrogation, deception detection, attitude similarity, interpersonal attraction, were operationalized as described by Gudykunst (1985). Reliabilities were computed for each of the dependent variables with alphas of .75 for self-disclosure, .66 for interrogation, .96 for attitude similarity,
The study was carried out near the end of the semester to ensure that participants had had sufficient opportunity to develop patterns of interaction and knowledge of their roommates.

Questionnaires were distributed at floor meetings three weeks before the end of the semester. Resident advisors for both floors were present and snacks were provided to create an informal atmosphere. Students were told that the study concerned communication between roommates and confidentiality was assured. Roommate pairs were separated into different areas of the room as they filled out the questionnaire.

RESULTS

The three hypotheses were tested using multivariate analysis. Using Wilks' lambda as the criterion statistic, the effect of communication effectiveness was significant ($F = 2.79; p = .034$) but no significant effect for cultural similarity ($F = .91; p = .522$) and no significant interaction effect for communication effectiveness by cultural similarity ($F = .58; p = .764$). The multivariate results support the second hypothesis, but not the first and third hypothesis.

Univariate analyses of the communication effectiveness variable revealed significant univariate effects on the variables of disclosure ($F = 7.49; p = .011$), attitude similarity ($F = 6.84; p = .015$), interpersonal attraction ($F = 20.16; p = .000$),

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DISCUSSION

Results do not support the first hypothesis that cultural similarity has an effect on disclosure, interrogation, deception, attitude similarity, interpersonal attraction, attributional confidence and shared communication networks. No significant difference in the communication between culturally similar and dissimilar roommates on these variables was shown. These findings are not consistent with Gudykunst's (1985b) study in which cultural similarity/dissimilarity produced significant multivariate effects on the same measures of aspects the nature and outcomes of communication.

The second hypothesis, that levels of communication effectiveness would have an effect on the set of dependent measures, was supported. The univariate analyses indicated communication effectiveness had an independent effect on four variables. Specifically, the mean score on disclosure was higher (1.07) for those more communicatively effective, than for those in the low communication effective group (.63). The attitude similarity score for those judged more competent in communication was higher (4.70) than for those in the less effective group (2.89). Interpersonal attraction was related to communication effectiveness with the more effective group having a mean score of 5.59 and the other group a mean score of 3.50. Those in the high communication effectiveness group had an average score of 75.91 for attributional confidence,
while those in the low communication effectiveness group averaged 59.06.

The third hypothesis, which predicted an interaction effect between cultural similarity and communication effectiveness, also was not supported. These results would suggest that skill in communication is more important than cultural differences. In this study those subjects who saw their roommates as effective communicators were also more likely to be willing to self-disclose to them, ask them questions about themselves, see them as more similar in attitudes, be more attracted to them and have greater confidence in making attributions about the roommate.

Given the solid support Gudykunst has found for the impact of cultural similarity and dissimilarity on this same set of dependent variables, the results of the present investigation must be seriously evaluated. There are a number of possible explanations for the differing conclusions.

Gudykunst and Nishida's (1984) sample was drawn about equally from Japanese and U.S. student populations and while all subjects in Gudykunst (1985b) were from the United States, half of his sample mentally targeted an individual from another culture for whom they described communication. In the present study, the U.S. students dominated because all of the culturally similar subjects and half of the culturally dissimilar subjects were from the United States. Any bias or preference related to U.S. culture in either the conceptual basis for variables studied, their measurement, would be exaggerated by the dominance of
the U.S. subjects. The small number of subjects in the present study may also be a factor.

The 1984 Gudykunst and Nishida study used the bogus stranger method of Byrne (1961) in which subjects had to describe their intended communication with an individual who had certain characteristics. Since subjects were describing intentions and a so, describing those intentions for a nonexistent person, it is possible the projected impact of the cultural differences on their communication was greater than is the actual impact of culture on interaction.

The 1985b Gudykunst study did ask respondents to describe communication with an actual person, however, and the results still supported the differing effect of cultural similarity or dissimilarity on the interactions in various types of relationships. Nevertheless, in friendships, there were minimal differences in the culturally similar and culturally dissimilar relationships.

The study reported here looks at communication between roommates and does not distinguish their relationship on the basis of acquaintance or friendship as Gudykunst’s work did. Some roommates may perceive of their relationship as a friendship while others may see it as an acquaintance. The nature of the roommate relationship may mask differences which distinguish roommates pairs from each other. Gudykunst’s (1985a) study of close intracultural and intercultural friendships suggests there is little difference between these friendships.

An alternative interpretation is that looking at the relationships type (e.g. acquaintance, friendship) emphasizes the
important relationship dimension of stability. Given the time of the semester these questionnaires were administered, the communication between these roommates would probably be best characterized as stable exchanges (Gudykunst, 1985a). Regardless of whether these individuals were personal friends or simply roommates, their communication may have become quite predictable. Uncertainty reduction theory would suggest, in fact, that cultural differences which might have existed at the beginning of the relationship may have become predictable. Even for those roommates no longer using uncertainty reduction strategies, there may be a consistency to their responses and a willingness to allow the nature of the communication to stay the same.

Those individuals judged to be effective communicators might have the skills to adjust, in both the short and long term to differences produced by cultural dissimilarity. In essence, those with communication competence would be able to predict, reduce uncertainty, and generally act appropriately in communication with their roommate by taking into account the influences of culture. This is consistent with the observations of Sillars and Scott (1983), who found greater attributional discrepancies in poorly adjusted intimate relationships, including both roommate and marital relationships.

The use of self-report measures in all these studies, coupled with experimental conditions in the Gudykunst and Nishida (1984) and Gudykunst (1985b) studies, requires discussion. The early studies ask subjects to filter their self-reports through a
lens which focuses on cultural and/or attitudinal dissimilarity or similarity. The current study does not shape the subjects’ perceptual filter in this way; rather subjects responded by describing their communication with another person whom they may or may not see as different culturally or attitudinally. Subjects asked to frame their responses by differences may unconsciously emphasize differences rather than equally salient similarities.

These results emphasize the importance of continued study of communication effectiveness for both intra- and intercultural communication. Communication was judged qualitatively different, manifest in significant quantitative measures, when the subject saw the roommate as an effective communicator.

The detailed analyses of the relationship between communication effectiveness and the dependent variables suggests several other interesting ideas. Self-disclosure, interrogation, and deception detection consider aspects of the process or content of communication. Attitude similarity, interpersonal attraction, attributional confidence and shared communication networks are actually outcomes of communication (which can then, in turn, influence future communication). Self-disclosure was significantly related to communication effectiveness and interrogation approached significance. Communication effectiveness is clearly a judgment made on the basis of prior interactions and as such is an outcome of communication. The strong influence of communication effectiveness on other outcomes of communication seems logical.
Those who are effective communicators, regardless of their roommate’s culture, create enough trust to allow the roommate to both self-disclose and seek personal information from their roommate. Interpersonal attraction and perceived attitude similarity are also influenced by the roommate’s skill in communication. Those who saw the roommate as an effective communicator were also much more confident about predicting their roommate’s behavior and response.

Weaknesses in this study include a small number of subjects, lack of behavioral verification of communication effectiveness by expert judgment, and a high proportion of subjects from the United States.

If communication effectiveness is such a strong an influence on communication between individuals from different cultures, then the standard definitions of intercultural communication employed by scholars in the field need to be reexamined. Communicative competence may render such exchanges more intracultural than intercultural. This study suggests that future work extending and setting boundary parameters for uncertainty reduction as it applied to intercultural communication should investigate the impact of communication effectiveness of interactants and the stability of the relationship.
REFERENCES


