

AD 664681

GROUP EFFECTIVENESS RESEARCH LABORATORY
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS

Quarterly Report
January 31, 1968

Communication, Cooperation, and Negotiation
in Culturally Heterogeneous Groups

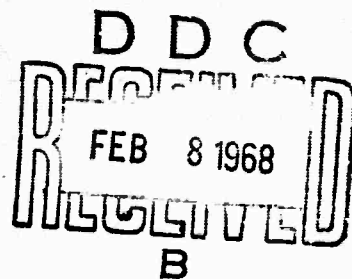
Report of Progress under Contract ARPA No. 454
Project Code 2870, Nonr 1834(36)

with the
Advanced Research Projects Agency

Fred E. Fiedler and Harry C. Triandis
Principal Investigators

This document has been approved
for public release and sale; its
distribution is unlimited.

Reproduced by the
CLEARINGHOUSE
for Federal Scientific & Technical
Information Springfield Va. 22151



UNCLASSIFIED

AD 664 681

COMMUNICATION, COOPERATION, AND NEGOTIATION IN
CULTURALLY HETEROGENEOUS GROUPS

Fred E Fiedler, et al

University of Illinois
Urbana, Illinois

January 1968

Processed for . . .

DEFENSE DOCUMENTATION CENTER
DEFENSE SUPPLY AGENCY



U. S. DEPARTMENT OF COMMERCE / NATIONAL BUREAU OF STANDARDS / INSTITUTE FOR APPLIED TECHNOLOGY

UNCLASSIFIED

QUARTERLY REPORT

January 31, 1968

Abstract

The focus of our project has continued to shift during the past quarter toward an integration of various subprojects and several studies of an integrative nature are in progress. Other studies concern the development of basic data on semantic features and culturally significant behavior, the dynamics of interactions in negotiation and bargaining, the effect of task structure on group climate and group interaction, and relevant methodological issues.

The two major studies which are currently in progress concern a comparison of training by means of Culture Assimilators and essays, as well as a concurrent comparison of training materials developed by means of the methods which have been developed by Triandis and by Osgood under Subproject I. This comparison should permit us to determine not only whether there is incremental value in Culture Assimilators over essays, but also whether the Subproject I material provides a better basis for developing either Culture Assimilators or essays.

The second major study in this category involved the development of an Iran Culture Assimilator and a field experiment to evaluate its effect on interactions of Americans and Iranians in cooperative and negotiation tasks. These are described below.

Subproject I (Triandis)

Comparison of Cognitive Reorganizations Resulting from Culture Assimilator and Essay Training Based on Different Raw Data.

The major new undertaking during this past quarter has been a set of studies which involve the development of Culture Assimilators and essays based solely on material obtained by means of Triandis' Role and Behavioral Differentials, Triandis' Antecedent-Consequent Method, and Osgood's Intercultural Word Atlas.

We have obtained, in the course of the last several years, a substantial body of data on Greek culture. This material included data from Role and Behavioral Differentials, the Word Atlas, and the Antecedent-Consequent method, as well as data obtained from public opinion questionnaires which yielded stereotypes of Greeks and Americans. On the basis of these data, Triandis and Vassiliou prepared an extensive essay on Greek culture and Greek national character (Technical Report No. 55). This essay provided the basis of a shortened version of a Greek Culture Assimilator, prepared by Chemers, Symonds, and Mitchell.

We have developed a Culture Assimilator for Thailand, based on critical incidents. This Culture Assimilator was shortened to be roughly comparable in length to the Greek Culture Assimilator. In addition, Chemers, Mitchell, and Symonds prepared an essay on the culture of Thailand, based on the material contained in the Thai Culture Assimilator. We now have, therefore, two sets of culture training materials which are roughly equivalent: A Greek essay and a Greek Culture Assimilator; a Thai essay and a Thai Assimilator. They both present cultural

material to the trainee but they differ in the background data on the basis of which they were constructed: The Greek material is based on Subproject I data alone, while the Thai material is based on critical incidents and similar evidence.

The subjects of the set of studies using these materials were 50 Americans (military personnel) who were taking extension courses in the Athens branch of the University of Maryland, and 225 students at the University of Illinois. The men in Greece received the essay material on Greece. The students at Illinois received the two types, essay and Assimilator, training on Thailand and Greece.

The criteria consisted of pre-tests and post-tests of the trainees on scales which indicate their understanding of Greek or Thai culture. Furthermore, accuracy of social perceptions which the trainees gain as a consequence of their learning experiences was tested directly. The experiments provide a complete design to test not only the effect of training but also the possible confounding effects which the pre-tests might have upon subsequent responses by subjects. The complete research design is shown in Table 1.

On the basis of this study we hope to get answers to the following questions. (Some preliminary results are already available and are indicated below.)

A. What kinds of changes occur in Culture Assimilator training?

The results suggest that changes do occur and that these tend to be mostly changes in affect rather than in cognition.

Table 1Basic Design of Comparative Training Studies

At	Experimental Groups	Control Group 1	Control Group 2	Control Group 3
Time 1	Pre-test	Pre-test	-	-
Time 2	Culture training	Irrelevant training	Culture training	Irrelevant training
Time 3	Post-test	Post-test	Post-test	Post-test

- B. What particular cognitions about the other culture seem to change most?

As far as we can tell at this time, changes are mostly in the knowledge about the basic attitudes of members of the other culture.

- C. In what ways does Culture Assimilator training differ from reading an essay on the same topic?

Analyses are still in progress.

- D. Does being sensitized to "cultural issues," which happens with the pre-test, interact in any way with Culture Assimilator training?

Preliminary results suggest that the answer is affirmative.

The Summers, Stewart, and Oncken study of foreign policy-making in American and Arab dyads has been completed. The results (briefly described in an earlier report) are now being written up in Technical Report form.

The Antecedent-Consequent study of cultural influences on cognition has now been analyzed. A draft of a Technical Report reporting the results of this study has been sent to the co-authors for comments.

Semantic Feature Analysis (Osgood)

Since the last report period, work has been concentrating on the validation of the use of ten a priori semantic features in discriminating the meaning of interpersonal verbs. Eight such validation studies are currently in progress and each will result in a separate Technical Report in the near future. Professor Osgood will participate in a Symposium on Language and Thought which will be held at the University of Arizona in late February, 1968. He will present a synthesis of theory and research on semantic feature analysis. This paper will be published as a Technical Report as part of the proceedings of this symposium.

One of the validation studies involves the data collected last spring by Judith Goodrich Ayer. Thirty-six subjects rated 40 interpersonal verbs on ten a priori features after they had been carefully instructed on the meaning and use of these features. The features were developed by Osgood (Technical Report No. 39) and were thought to underlie the differentiation of the meaning of interpersonal verbs (for example, the features Moral/Immoral, Superordinate/Subordinate, Associative/Dissociative distinguish different verbs). The a priori judgments were related to those obtained by Ss, by means of Chi square tests. These tests were run between the lower, middle, and upper thirds of the subjects' mean ratings for each verb on that feature (see Table 2). Seven of the ten features appear validated.

Table 2

Chi Square Analysis

Feature	χ^2
Deliberate/Impulsive	7.05
Moral/Immoral	No analysis-a <u>priori</u> features unbalanced.
Supraordinate/Subordinate	40.63***
Future-oriented/Past-oriented	24.97***
Potent/Impotent	9.73*
Initiating/Reacting	43.81***
Associative/Dissociative	37.43***
Terminal/Interterminal	10.00*
Ego-oriented/Alter-oriented	27.56***
Active/Passive	No analysis-a <u>priori</u> features unbalanced.

Chi Square analysis between the lower, middle and upper thirds of instructed subjects' mean ratings of 40 interpersonal verbs on each of ten semantic features with the corresponding a priori ratings.

a df = 4 for all tests

* p < .05

*** p < .001

Only the features Deliberate/Impulsive, Potent/Impotent and Terminal/Interterminal failed to reach the .001 level of significance, and the last two mentioned reached the .05 level. This shows that when individuals are given descriptions of the features, they can operate with most of them with an unusual degree of accuracy. Thus, several of the features identified to date do in fact contribute to the meaning of verbs.

The meaning systems of these subjects have been determined from factor analyses of these data, as well as from the same subjects' ratings on a pre-test involving judgments of all combinations of 30 interpersonal verbs with 30 adverbs -- for apposite, permissible and anomalous meaning pairings. A Technical Report describing these data and other procedures relevant to a semantic theory of features from the data collected in the Semantic Game Study is currently in preparation.

The Technical Report on the group dynamics and productivity of the groups assembled on the basis of differences and similarity in their use of the 40 interpersonal verbs should be completed by early March, 1968.

Subproject III (Fiedler)

Iran Study

The field experiment conducted by Martin Chemers while at the Tehran Research Unit in Iran is now nearing completion. To recapitulate, the study involved a total of 57 Americans living and working in Iran. Of these, 30 were men, 27 were women. Each of these Americans was given either Culture Assimilator training or culturally irrelevant training on the physical geography of Iran. Each of the subjects was then assigned to work with two Iranians on one task requiring cooperation and on one task requiring the negotiation of an issue on which Americans and Iranians hold divergent values.

All data have now been punched on IBM cards, and data analysis is in progress. Initial findings of the study clearly indicate that the Culture Assimilator training had a significant effect on team performance, although, just as we have found in previous studies, there are a number of interactions with sex, with task, and with the leadership style score of the individual in charge of the group. We hope to have a substantial body of results ready for presentation in time for the next Quarterly Report.

Task Structure

A number of studies investigate the effect of task structure on leadership and group performance. Heterocultural interaction depends to a large extent, on the group task which members have to perform.

Tasks which require a high degree of collaboration, for example, will require group members to communicate more. Good interpersonal relationships under these conditions should, therefore, be more important for task success than in situations requiring a low degree of collaboration. Not only are member relationships partly determined by the nature of the group task -- so also is leader behavior. Tasks which are unstructured, for example, require the leader to initiate structure if his group is to work effectively.

Hence, it was assumed, that theories of cross-cultural interaction must also include reference to the type of task which members of different cultures perform together.

In order to obtain systemic information on the effect of task characteristics on group interaction, O'Brien has conducted a number of theoretical and laboratory studies. In an earlier Technical Report (No. 46), he derived a method of classifying tasks using Structural Role Theory. One dimension on which tasks may differ is cooperation and, in a study of military groups in Australia, it was shown that the cooperation requirements of the task affected interpersonal, structuring, and task behaviors of leaders and members (O'Brien and Biglan, 1967).

A laboratory study was performed which showed how, for a particular creative task, the form of cooperation imposed significantly affected productivity and the group climate (O'Brien and Ilgen, 1967). This study was reported in detail in the last report. Further analyses are now being performed to establish the effects of task structure on

leader behavior and leader effectiveness.

Since the last report, pilot runs of a similar experiment have been conducted. The group task used is a structured manipulative task, whereas the task used in the earlier study was a structured creative task.

These studies will provide knowledge about the way in which tasks may generate organizational and interpersonal problems for a group. This is part of the "situation-specific" knowledge which can be used in training persons for cross-cultural interaction.

Field Validation of Culture Assimilators

We are currently arranging to test the effectiveness of the Culture Assimilators in cooperation with various government agencies and private organizations.

Specifically, a joint study is now under discussion with the Agency for International Development (AID). This will compare culture matched groups of trained and untrained AID men destined for Thailand and Vietnam as well as Iran. Performance and adjustment scores of these men will be obtained after the first three months and again after nine months overseas. We are discussing a similar arrangement with the Peace Corps. This study would involve about 100 volunteers who are now being trained at the University of Hawaii.

We are also hoping to conduct a well controlled field experiment this summer in collaboration with the Los Amigos de las Americas organization in Central America. The Board of Directors, after a recent

meeting, has expressed its strong support for a continuation of our research relationship. We have been given to understand that we will be able to make assignments of leaders and team members in accordance with a predetermined experimental design. This will allow a test of various predictions which flow from our previous work of leadership and culture training.

PROFESSIONAL PERSONNEL

(Contract Nonr 1837 (36))

1967 - 68

Personnel Supported by Contract

Ayer (Goodrich), Judith	Research Assistant	50%
Bates, Peter	Research Assistant	50%
Hewitt, Thomas	Research Assistant	50%
O'Brien, Gordon	Research Assistant Professor	67%
Oncken, Gerald	Research Assistant	50%
Stewart, Thomas	Research Assistant	50%
Summers, David	Research Assistant Professor	67%
Symonds, John	Research Assistant	50%
Wood, Michael	Research Assistant	50%

Non-salaried Personnel Working on ARPA ONR Project or Related Research

Chemers, Martin	Research Associate
Fiedler, Fred	Professor
Mitchell, Terence	Research Assistant
Osgood, Charles	Professor
Nealey, Stanley	Assistant Professor
Triandis, Harry	Professor

Foreign Consultants

Archer, W. K.	Tehran
Vassiliou, V. (M. Nassiakou)	Greece
Lekhyananda, Duangduen	Thailand

TECHNICAL REPORTS AND PUBLICATIONS

- Fiedler, F. E., Bass, A. R., & Fiedler, Judith M. The leader's perception of coworkers, group climate, and group creativity: A cross-validation. Technical Report No. 1, May, 1961.
- Bass, A. R., Hatton, G., & McHale, T. J. Originality, intelligence, and performance on problem-solving tasks: A pilot study of their relationship. Technical Report No. 2, April, 1962.
- McHale, T. J. & Stolurow, L. M. Concept formation with metrically multi-valued clues and response categories. Technical Report No. 3, April, 1962.
- Fiedler, F. E. & Meuwese, W. A. T. The leader's contribution to performance in cohesive and uncohesive task groups. Technical Report No. 4, April, 1962. Also in Journal of Abnormal Social Psychology, 1963, 67, 83-87.
- Triandis, H. C., Mikesell, Eleanor H., & Ewen, R. B. Some cognitive factors affecting group creativity. Technical Report No. 5, May, 1962. Also in Human Relations, 1965, 18, 33-55.
- Triandis, H. C., Bass, A. R., Ewen, R. B., & Mikesell, Eleanor H. Team creativity as a function of the creativity of the members. Technical Report No. 6, April, 1962. Also in Journal of Applied Psychology, 1963, 47, 104-110.
- Anderson, L. R. & Fiedler, F. E. The effect of participatory and supervisory leadership on group creativity. Technical Report No. 7, November, 1962. Also in Journal of Applied Psychology, 1964, 48, 227-236.
- Triandis, H. C., Mikesell, Eleanor H., & Ewen, R. B. Task set and attitudinal heterogeneity as determinants of dyadic creativity. Technical Report No. 8, November, 1962. Also in Human Relations, 1965, 18, 33-51.
- Hatton, G. I. Two-choice conditional probability learning with meaningful and non-meaningful stimuli. Technical Report No. 9, October, 1962.
- Fiedler, F. E. A Contingency Model of leadership effectiveness. Technical Report No. 10, July, 1963. Also in L. Berkowitz (Ed.), Advances in Experimental Social Psychology, 1964, Vol. 1., 149-190.
- Frase, L. The effect of social reinforcers in a programmed learning task. Technical Report No. 11, September, 1963.

- Triandis, H. C. The influence of culture on cognitive processes. Technical Report No. 12, October, 1963. Also in L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 1. New York: Academic Press, 1964.
- Bereiter, C. Curricular and specific transfer to problem solving ability. Technical Report No. 13, October, 1963.
- Morris, C. G. & Fiedler, F. E. Application of a new system of interaction analysis to the relationships between leader attitudes and behavior in problem-solving groups. Technical Report No. 14, March, 1964.
- Triandis, H. C., Fishbein, M., & Hall, Eleanor R. Person perception among American and Indian students. Technical Report No. 15, June, 1964. Also in Modern Trends in Psychology, Bombay, 1967.
- Triandis, H. C. & Hall, Eleanor R. Creative problem solving in culturally heterogeneous group. Technical Report No. 16, June, 1964.
- Forster, K. I., Triandis, H. C., & Osgood, C. E. An analysis of the use of the method of triads in research on the measurement of meaning. Technical Report No. 17, June, 1964.
- Anderson, L. R. Some effects of leadership training on intercultural discussion groups. Technical Report No. 18, June, 1964.
- Katz, Evelyn W. A content-analytic method for studying interpersonal behavior. Technical Report No. 19, October, 1964.
- Katz, Evelyn W. A study of verbal and nonverbal behaviors associated with social roles. Technical Report No. 20, October, 1964.
- Fishbein, M., Landy, Eva, & Hatch, Grace. Some determinants of an individual's esteem for his least preferred coworkers: An attitudinal analysis. Technical Report No. 21, February, 1965.
- Mauwese, W. A. T. & Fiedler, F. E. Leadership and group creativity under varying conditions of stress. Technical Report No. 22, March 1965.
- Hackman, J. R. & Jones, L. E. Development of a set of dimensions for analyzing verbal group products. Technical Report No. 23, July, 1965.
- Hackman, J. R. Tests, questionnaires and tasks of the Group Effectiveness Research Laboratory; 1951-1964. Technical Report No. 24, July, 1965.
- Fiedler, F. E. The effect of cultural heterogeneity, leader power, and leader attitudes on group performance: A test of the Contingency Model. Technical Report No. 25, August, 1965. Also in Journal of Experimental Social Psychology, Vol. 2, No. 3, 1966, 237-264.

- Davis, E. E. & Triandis, H. C. An exploratory study of inter-cultural negotiation. Technical Report No. 26, October, 1965. Also in Journal of Personality and Social Psychology, 1965, 2, 715-725.
- Parisi, D. Social reinforcement performance in programmed learning in Italy. Technical Report No. 27, September, 1965.
- Triandis, H. C. & Davis, E. E. Some methodological problems concerning research on negotiations between monolinguals. Technical Report No. 28, December, 1965.
- Fiedler, F. E. & Meuwese, W. A. T. The effect of stress on the contribution of member intelligence to group creativity. Technical Report No. 29, January, 1966.
- Anderson, L. R. Initiation of structure, consideration, and task performance in intercultural discussion groups. Technical Report No. 30, April, 1966.
- Chemers, M. M., Fiedler, F. E., Lekhyananda, D., & Stolurow, L. M. Some effects of cultural training on leadership in heterocultural task groups. Technical Report No. 31, April, 1966. Also in International Journal of Psychology, 1966, 1, 301-314.
- Davis, E. A methodological study of behavioral and semantic differential scales relevant to intercultural negotiations. Technical Report No. 32, June, 1966.
- Fiedler, F. E. A review of research on ASo and LPC scores as measures of leadership style. Technical Report No. 33, May, 1966.
- Triandis, H. C., Shanmugam, A. V., & Tanaka, Y. Interpersonal attitudes among American, Indian, and Japanese students. Technical Report No. 34, July, 1966. Also in International Journal of Psychology, 1966, 3, 468-472.
- Triandis, H. C. Toward an analysis of the components of interpersonal perception. Technical Report No. 35, December, 1966. Also in Muzafer Sherif, Carolyn Sherif, and Donald P. Kent (Eds.) Attitudes, ego involvement and attitude change. New York: Wiley, 1967.
- Davis, E. E. & Grobstein, Nadine. Multiple factor analysis of interpersonal perception. Technical Report No. 36, December, 1966.
- Triandis, H. C., Vassiliou, Vasso, & Thomanek, E. K. Social status as a determinant of respect and friendship acceptance. Technical Report No. 37, August, 1966. Also in Sociometry, 1966, 29, 396-405.

- Naidoo, Josephine C. An inquiry into the structure of attitudes and behavior: A validation study. Technical Report No. 38, August, 1966.
- Osgood, C. E. Speculation on the structure of interpersonal intentions. Technical Report No. 39, September, 1966.
- Parisi, D. Italian word association norms. Technical Report No. 40, July, 1966.
- Parisi, D., Cappelli, U., & Stolurow, L. M. Contextural predictability and frequency factors. Technical Report No. 41, August, 1966.
- Stolurow, L. M. & Santhai, Suthita (with assistance of Koopman, Ray). Critical incidents with heterocultural interactions. Technical Report No. 42, November, 1966.
- Triandis, H. C., & Vassiliou, Vasso. Frequency of contact and stereotyping. Technical Report No. 43, October, 1966. Also in Journal of Personality and Social Psychology, 7, No. 3, November, 1967, 316-328.
- Fiedler, F. E. Leadership style and the performance of coacting groups. Technical Report No. 44, October, 1966.
- Triandis, H. C., Vassiliou, Vasso, & Nassiakou, Maria. Some cross-cultural studies of subjective culture. Technical Report No. 45 (67-1), January, 1967. Also in Journal of Personality and Social Psychology Monographs, 1968 (in press).
- O'Brien, Gordon. Methods of analyzing group tasks. Technical Report No. 46 (67-2), January, 1967.
- Hunt, J. G. A test of the leadership contingency model in three organizations. Technical Report No. 47 (67-3), January, 1967.
- Nealey, S. M. & Blood, M. Leadership performance of nursing supervisors at two organizational levels. Technical Report No. 48 (67-4), January, 1967.
- Triandis, H. C., Vassiliou, Vasso, & Nassiakou, Maria. Some cultural differences in the perception of social behavior. Technical Report No. 49 (67-5), February, 1967. Also in Journal of Personality and Social Psychology Monograph, 1968 (in press).
- Triandis, H. C., Tucker, L. R., Koo, Ping, & Stewart, T. Three-mode factor analysis of the behavioral component of interpersonal attitudes. Technical Report No. 50 (67-6), February, 1967.

- Ninane, Paul & Fiedler, Fred. E. Member reactions to success and failure of task groups. Technical Report No. 51 (67-7), May, 1967.
- Fishbein, M., Landy, Eva, & Hatch, Grace. Consideration of two assumptions underlying Fiedler's contingency model for the prediction of leadership effectiveness. Technical Report No. 52 (67-8), M. 1967.
- Nayar, E.S.K., Touzard, H., & Summers, D. Training, tasks, and mediator orientation in heterocultural negotiations. Technical Report No. 54 (67-10), May, 1967. Also accepted for publication Human Relations.
- Traindis, H. C. & Vassiliou, Vasso. A comparative analysis of subjective culture. Technical Report No. 55 (67-11), October, 1967.
- Fiedler, F. E. A theory of leadership effectiveness. New York: McGraw-Hill, 1967.
- Hackman, J. R., Jones, L. J., & McGrath, J. E. A set of dimensions for describing the general properties of group-generated written passages.
- Hunt, J. G. Fiedler's leadership contingency model: An empirical test in three organizations. Organizational Behavioral and Human Performance, 2, No. 3, 1967, 290-308.
- Hunt, J. G. Leadership in organizations: Some new directions in research. In A. Filley (Ed.), Proceedings of the Tenth Annual Midwest Academy of Management Meeting. Carbondale, Illinois: Bureau of Business Research, Southern Illinois University. In press.
- Hunt, J. G. Another look at human relations training. Training and Development Journal. In press.
- Hunt, J. G. A breakthrough in leadership research. Personnel Administration, 30, No. 5, Sept. - Oct., 1967, 38-44.
- Hunt, J. G. Organizational leadership: Some theoretical and empirical considerations. Business Perspectives, In press.