

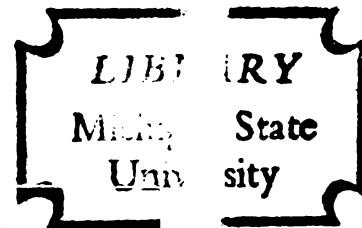


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THE EMPATHIC AFFECT OF A SOCIODRAMATIC
GAME ON PROSPECTIVE INNER CITY TEACHERS

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PETER FRANCIS FLYNN
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This is to certify that the
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THE EMPATHIC AFFECT OF A
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ABSTRACT

THE EMPATHIC AFFECT OF A SOCIODRAMATIC GAME ON PROSPECTIVE INNER CITY TEACHERS

By

Peter Francis Flynn

Purpose of the Study

It was the purpose of this study to assess the effectiveness of an original, sociodramatic game, the Washington Heights Simulation Game (WHSG), as a method for preparing inner city teachers in an affective manner. Specifically, two basic questions were posed about the WHSG: (1) Do prospective inner city teachers who play the WHSG express attitudes more similar to those of inner city residents than those expressed by prospective inner city teachers who do not play the WHSG? (2) Are prospective inner city teachers who have played the WHSG more empathic toward inner city people than those who have not played the WHSG?

The Washington Heights Simulation Game is a socio-dramatic learning experience designed to develop in prospective inner city teachers a feeling for powerlessness and its accompanying frustrations, similar to that felt by people of minority groups in the inner cities of

America. Players are given information about the living conditions (educational, social, political, physical) of a simulated inner city environment, Washington Heights. Players act out the roles of Xenoos, a minority group that makes up the majority of the population of Washington Heights, attempting to better their situation. Before the game begins players are briefed concerning the rules and objectives. Following the game players are encouraged to talk about their personal feelings as they experienced them during the game. Participants frequently say that following the game they feel that they have a better understanding, emotionally, of the plight of blacks in the inner city, whereas before their awareness was primarily intellectual.

Empathy in prospective inner city teachers seemed to be a worthwhile trait to assess as it is affected by a sociodramatic experience. The empathic teacher would be effective in his ability to reach and teach students of a different culture. The empathic teacher has a feeling for and an awareness of the attitudes of people different from himself. Studies have shown the characteristic of empathy to be highly correlated with teaching success.

A broadening of attitudinal understanding can come about through a sociodramatic game consisting of role playing within a simulated environment, which offers

a non-threatening situation conducive to the exploration of personal, emotional feelings.

Methodology

In this study nine experimental groups were administered a treatment, the Washington Heights Simulation Game, in order to test the effectiveness of this game in developing an empathic response on the part of prospective inner city teachers for residents of the inner city. Following participation of each group in the WHSG, data were gathered through the use of the Flynn Attitude Inventory (FAI). The preliminary items of the FAI were field tested on an inner city norm group and the final items were selected on the basis of the lowest standard deviation. The same data were gathered from control groups that did not participate in the WHSG. The data were measured to obtain similarity, projection, and raw and refined empathy scores for each group. Comparisons were made using a correlated t-test and the .05 level of significance, between control and treatment groups.

Findings of the Study

Groups which participated in the WHSG expressed attitudes on the FAI which had greater similarity with the inner city norm group than did the attitudes expressed by the control groups. Treatment groups also projected more than control groups when responding to the FAI as

they thought inner city people would respond to the items. Although treatment groups expressed greater raw empathy than control groups, the difference was significant at the .2 level and therefore not sufficient to reject the null hypothesis. Experimental groups had lower refined empathy scores than control groups. Administering the FAI to an experimental group before playing the WHSG showed no differences when compared with other experimental groups on the similarity and refined empathy scores. Further calculation of selected items of the FAI, deemed to be particularly pertinent to the objectives of the WHSG, showed the differences of the refined empathy scores of control groups to be less significant than when considering all items.

The Washington Heights Simulation Game is a useful method for affectively preparing inner city teachers. This study has shown it to be particularly effective in eliciting attitudes from prospective inner city teachers similar to those expressed by inner city residents. This game should be used in the preparation of inner city teachers along with other techniques for developing cross-cultural understanding.

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CHAPTER I

INTRODUCTION

This study is about a method used for the development of empathy in prospective inner city teachers. The method used was an original, sociodramatic game, which simulates an inner city environment. In the remainder of this chapter the nature of the problem, the basis of the study including general hypotheses, definitions and assumptions, as well as an overview of the study are presented.

Nature of the Problem

More conclusively today than ever before, people involved in inner city teacher education are aware of the need to devise methods of preparation which will develop the primarily affective, social perceptions of teachers. Teachers at large seem to be asking for some experiences which will be conducive to a fuller understanding of the people they will be teaching. At times, this has been cited as the necessity for the teacher to "reach" before he or she can teach. In order to "reach" another person, one must first understand the way the other person feels

about certain things. Generally, to "reach" another person is to put oneself in that person's shoes and surmise how that person would react in a given situation. Arthur Pearl pointed out that a desirable attribute of a teacher ". . . is that of being hip. By that I mean a teacher has to understand the hang of a student's hat. He has to free himself from his biases and prejudices."¹

This process, which some researchers have referred to as empathy, is helpful in preparing a person to become involved in the learning process as a teacher. This should be true whether the teacher will be looking to the learner as a data source or the teacher has the data and will be tailoring the communication process to be effective with a particular learner.

Furthermore, whatever is important for preparing teachers at large becomes crucial, if these teachers are headed for the inner city. The inner city school child is more dependent upon the school as an institution of access into the economic and social mainstream of society. Therefore, it behooves those in inner city teacher education to create methods and materials which will help teachers to become more empathic.

Empathic ability seems to be basic to the human personality. G. H. Mead stressed the importance of a

¹Arthur Pearl, "A Hard Look at Teacher Education," Changing Dimensions in Teacher Education, Yearbook of the American Association of Colleges for Teacher Education (Washington: AACTE, 1967), p. 139.

person's ability to conceptualize "the generalized other." Mead contended that a person could not develop a complete self without taking in the attitudes of an organized social group.² D. A. Stewart also saw empathy as being an integral component of the self:

Empathy is thus the psychological ground of personal identity and communication. The two aspects of the empathic process, identifying with and yet respecting the other, yield a growing insight into oneself.³

The gap between student and teacher must be closed and it seems likely that the obligation for this should fall with those who are responsible for teacher preparation. Regarding teacher education, Passow stated, "The emphasis must be on knowing about and understanding the lower class culture, especially where it collides with the culture that permeates the schools."⁴

Today, much has been written on the disadvantaged. Michael Harrington's book, The Other America,⁵ detailed the dilemma of the impoverished people in the United States, urban and rural. The Kerner Commission's report⁶

²George H. Mead, Mind, Self, and Society (Chicago: University of Chicago Press, 1934), pp. 154-155.

³David A. Stewart, "The Psychogenesis of Empathy," The Psychoanalytic Review, 41:216-228 (July, 1954).

⁴Harry Passow, "Diminishing Teacher Prejudice," New York State Education, 55:6-10 (February, 1968).

⁵Michael Harrington, The Other America (Baltimore: Penguin Books, 1968).

⁶U. S. National Advisory Commission on Civil Disorders, Report of the U.S. National Advisory Commission on Civil Disorders (New York: Bantam Books, 1968).

spelled out the historical, institutional and individual racism of America. James S. Coleman's findings in Equality of Educational Opportunity,⁷ depicted the ill effects of segregated schools and the lack of fate control. These works, among others, have helped to fill the informational, or primarily cognitive, void concerning the culturally different and have been useful in the preparation of teachers. But, as Will noted, little has been done in the area of identification and realization of the affective goals of teacher education.⁸

Gage, in his article, "Explorations in the Perception of Others," clearly pointed out:

The studies of the perception of attitudes and opinions of groups suggest strongly that accuracy of social perception is positively and significantly related to effectiveness as a teacher, supervisor of clerical staff, as a group leader.⁹

In a later article, Gage stated that "to the degree that this perception is 'accurate,' the teacher's behavior will more likely be 'appropriate' and hence effective."¹⁰

⁷James S. Coleman, Equality of Educational Opportunity (Washington: U.S. Department of Health, Education and Welfare, Office of Education, 1966).

⁸R. Y. Will, "The Education of the Teacher as a Person," The Journal of Teacher Education, 18:471-475 (Winter, 1967).

⁹N. L. Gage, "Explorations in the Understanding of Others," Educational and Psychological Measurement, 13:14-26 (Spring, 1953).

¹⁰N. L. Gage, "Explorations in Teacher's Perceptions of Pupils," The Journal of Teacher Education, 9:97-101 (March, 1958).

Arnez stated:

Educators, like their pupils, are often unable to cross social and cultural boundaries without help. But, educators have professional obligation to cross these if they are to teach in today's multi-cultural and desegregated schools.¹¹

So now that the need has been shown and the responsibility has been placed, it remains to be stated more specifically what the teachers have to learn to do, and to delineate how this might be carried out.

The inner city resident, especially if black, is caught up in a milieu which is oppressive, stultifying and capable of rendering one powerless. The average college graduate who has been prepared as a teacher has not known to any significant degree this lack of fate control so often experienced by the inhabitants of the ghetto. Some people have tried to understand what it is like to live inside the skin of a person who is different. John Howard Griffin described his ventures as a black man in Black Like Me,¹² and more recently, Grace Halsell wrote of her view from behind a black mask in Soul Sister.¹³ This is the ultimate in simulation learning. Students, who are preparing to become teachers of the physically handicapped, often spend time walking with a blindfold on to get a

¹¹Nancy L. Arnez, "A Unique Teacher Education Program," Improving College and University Teaching, 16:150-152 (Spring, 1968).

¹²John Howard Griffin, Black Like Me (Boston: Houghton Mifflin Company, 1961).

¹³Grace Halsell, Soul Sister (New York: World Publishing Co., 1969).

feeling for the experience of blindness. These experiences, granted, do not allow the individual to get deeply into things like despair and cynicism, because the individual knows that he or she can take off the blindfold, or leave the black life and return to the relative security of a white existence. However, it seems as though a well-planned sociodramatic experience might provide a useful transition for the move from the passivity of being a college student to the action of being an inner city teacher, as part of an effort to develop the empathic response.

This kind of vicarious experience should be offered not so that one can know what it is like to be black or oppressed; no game can reveal that, but so that prospective inner city teachers can be somewhat aware of how blacks come to perceive the "game of life" as run by whites. Thus, we come to know ourselves as others see us, which is one of the first steps in understanding others.

Rogers cited experiential learning as one of the ways to open things up to change:

. . . the kind of learning engaged in by the whole person, in both his cognitive and affective aspects. It is learning in which the person is involved. It is self-initiated learning. It is learning that makes a difference--in the individual's behavior, attitudes, and in his personality.¹⁴

¹⁴Carl R. Rogers, "What Psychology Has to Offer to Teacher Education," Mental Health and Teacher Education, Yearbook of the Association for Student Teaching (Dubuque, Iowa: AST, 1967), p. 42.

Rogers also noted the educational advantage of a life-like academic activity:

. . . it faces the student with a problem which, while not real to him in the ordinary sense, becomes real through simulation. It then involves him in a meaningful, personal, participative, experiential learning as he confronts the problem.¹⁵

In the simulation developed for this study, the concept of Mead's "generalized other"¹⁶ was combined with ideas from Moreno in the field of sociodrama. Moreno showed the connection when he wrote: "In sociodramatic procedure the subject is not a person, but a group. Therefore, it is not an individual Negro who is considered, but all Negroes, all Christians, all Jews are considered."¹⁷

Specifically, this simulation was devised for students who are about to engage in a cross-cultural teaching situation. They have hopefully developed the "generalized other" for the group to which they belong and now they can use some practice at gaining a feeling for the "generalized other" of another cultural group, namely inner city residents. Moreno pointed out the applicability of sociodrama to the cross-cultural situation:

For the study of cultural inter-relations the sociodramatic procedure is ideally suited, especially when two groups co-exist in physical proximity and their members respectively are in a continuous process of interaction and exchange of values.¹⁸

¹⁵Ibid., p. 53.

¹⁶Mead, loc. cit.

¹⁷J. L. Moreno, Sociodrama, Psychodrama Monographs, No. 1 (New York: Beacon House Press, 1944), p. 15.

¹⁸Ibid., p. 6.

This or any other simulation gaming should not be taken as a panacea, but merely as an activity which will possibly lead to some insight that will make the players more empathic toward the people whom they are playing. As Coplin stated, "The simulation is not valued except as a waystation to more precise knowledge: It appraises us of our areas of ignorance, and it illustrates for students or laymen otherwise difficult principles."¹⁹ In other words, simulation is one way of easing a person into the real thing, while keeping the anxiety level low and non-threatening enough to allow some affective learning to take place.

The Study

Purpose

The purpose of this study was to assess the effectiveness of an original, sociodramatic game, the Washington Heights Simulation Game,²⁰ in developing the empathic ability of prospective inner city teachers. Since the theoretical base of empathy is new, and since there is little or no methodology for preparing teachers in this most crucial affective ability, this study utilized a refined conceptual definition of empathy in an experiment

¹⁹William D. Coplin, Simulation in the Study of Politics (Chicago: Markham Publishing Company, 1968), p. 150.

²⁰For a complete description of the WHSG, see Appendix A.

that might contribute to the supply of methods conducive to cross-cultural understanding in the teaching/learning situation.

Hypotheses²¹

The following are the general hypotheses of this study:

- H-1 Prospective inner city teachers who participated in the Washington Heights Simulation Game (also noted as "WHSG") will demonstrate a greater empathy for inner city residents than those who do not experience the game.
- H-2 The responses of prospective inner city teachers following their experience with the WHSG will be similar to the responses of inner city residents on an attitude inventory.
- H-3 Taking the attitude inventory as a pretest before the WHSG will further increase empathy on the part of the prospective inner city teachers as measured following the game.

Definitions

The definitions of projection, similarity and raw and refined empathy are adapted from a study by Bender and Hastorf:²²

Projection.--The total item by item deviation of the forecasters' own responses from their predictions for

²¹Stated in testable form in Chapter III.

²²J. E. Bender and H. A. Hastorf, "On Measuring Generalized Empathic Ability," Journal of Abnormal and Social Psychology, 48:503-506 (1953).

associates (the smaller the deviation, the greater the projection).

Similarity.--The deviation between the subjects' own responses and the responses of their associates (the smaller the deviation, the greater the similarity).

Raw empathy.--The predicted responses for associates compared with the actual responses of associates (the smaller the deviation, the greater the raw empathy).

Refined empathy.--The difference between the raw empathy score and the projection score.

Inner city residents.--In this study the inner city residents were from Detroit, Michigan. They were predominantly black, ranged in age from 18-35, and came from areas of Detroit known as "hard core" sections of the city.

Prospective inner city teachers.--The subjects participating in this study were students enrolled in college courses, who expressed an interest in teaching in or learning more about teaching in the inner city.

Sociodramatic game.--The game used in this study is the Washington Heights Simulation Game (WHSG), developed by the researcher. It is based on the sociodramatic principles of Moreno, in that it is a "deep action method dealing with inter-group relations and collective

ideologies."²³ The WHSG is based on Coplin's notion of gaming, that is the "structured interaction between players of roles."²⁴

Assumptions

One of the major assumptions of this paper is that the teacher of the inner city who is empathetic is more effective than the one who is not.

A further assumption is that empathy can be developed within each of us and that its development can be operationally measured.

Overview

In Chapter I the need for the study is stated along with the purposes, general hypotheses, definitions and assumptions of the study. The literature pertinent to theoretical traditions underlying the study is reviewed in Chapter II. Also, recent studies in the field of teacher education, which have considered topics similar to the one presented in this paper, are summarized.

In Chapter III the sample, operational measures, limitations, testable hypotheses, design, and analysis are described. An analysis of the results, the findings from the gathered and analyzed data, are presented in Chapter IV. Chapter V contains a summary of the study, including

²³Moreno, op. cit., p. 3.

²⁴Coplin, op. cit., p. 149.

the conclusions drawn from the data, and implications for further empirical and conceptual studies.

CHAPTER II

REVIEW OF THE LITERATURE

In preparing this study of the effectiveness of a sociodramatic method for developing empathy in prospective inner city teachers, the previous work done by researchers in the pertinent fields was investigated. The results of the investigation of the literature will be presented in three major divisions: 1) Affective Teacher Education, 2) Previous Approaches to the Definition and Study of Empathy, and 3) Experiential Learning and Attitudinal Change.

Affective Teacher Education

Teacher Education for the Inner City

Many teachers find the inner city a traumatic setting. They historically do not want to make a career out of teaching there. They have become engulfed in the role of the teacher. Their behavior is so constricted by conceptualized lines which they have drawn or accepted that they have great difficulty in assessing with accuracy the needs of their students, who are culturally different.

Part of the problem lies in the individual's perception of a change in role from that of a student to that of a teacher. According to Will:

Many other teachers find the transition from the passivity of being a student to the active involvement of being a teacher too demanding. They feel it is unrealistic to be asked to take the responsibility for their actions, to exhibit genuine feelings and to become actors in rather than reactors to life.¹

Another part of the problem is getting teachers and prospective teachers to expand these conceptual lines they have drawn for themselves in order that they might better understand the cultural milieu of their students, which has so much to do with determining educational needs. As Donovan stated:

Teachers need to be immersed in the smell and taste and throb of the social realities of cities and suburbia, and homes and neighborhoods and gangs that children bring to school with them. They must also be abreast of the ideas and strategies of government, welfare agencies, churches and scholars for the amelioration or elimination of unwholesome social environments.²

Today, educators are noting that although the need for improvement of teacher education in general is important, the need for improved teacher education for the inner city is urgent and crucial.^{3,4}

¹Will, op. cit.

²Rev. C. F. Donovan, S.J., "Tradition and Innovation in Teacher Education," Changing Dimensions in Teacher Education, Yearbook of the American Association of Colleges for Teacher Education (Washington: AACTE, 1967), p. 18.

³Ibid., p. 19.

⁴E. O. Melby, "The Contagion of Liberal Education," The Journal of Teacher Education, 18:134-137 (Summer, 1967).

Smith noted the past failure of teacher education:

The fault (of the collapse of the urban school) lies within the larger society that fails to acknowledge the existence of black people and subsequently trains teachers and constructs curriculums and materials for a presumably monolithic white middle class society. Teachers have failed because for the most part, they don't know anything about, care little about, and have not been trained to teach their black and brown pupils.⁵

Teacher education is certainly not the only area in which improvement needs to come in order to resolve the mammoth problems of the inner city. It is because teacher education is the focus of this study that the ills of inner city teacher education are examined.

No longer can those involved in teacher education assume that tinkering with the regular program is sufficient to adequately prepare teachers for the inner city. Smith pointed out the "need for drastic changes in the training of teachers. Teachers are frightened and frustrated as they attempt each day to confront what is for most of them the urban ordeal."⁶

It is interesting to note that when people write of the conditions of urban teachers they often refer not to intellectual skills, but to psychological states. For example, Ornstein claimed that "the teachers (of the disadvantaged) are the victims of an intolerable system,

⁵D. H. Smith, "Preparation of Teachers for the Central City," Teacher Education/ Issues and Innovations, Yearbook of the American Association of Colleges for Teacher Education (Washington: AACTE, 1968), p. 50.

⁶Ibid., p. 53.

and this causes them to become frustrated, angry and finally indifferent."⁷

Part of the cause of this frustration is that by and large teachers of the inner city are dealing with strangers, children of a culture they do not understand. Foster contended that "most teachers and school administrators have not been able to bridge the gap between their culture and that of their disadvantaged students."⁸

In a study by Howard it was found that middle class teachers tended to misinterpret the desires and underestimate the interests of lower class children. Further, the teachers tended to underestimate the number of problems disadvantaged children face in the school environment and to overestimate the number of problems that are related to the home environment and family relationships.⁹

The above findings carry with them an implicit charge for preparing teachers to work with culturally different children. That charge is that prospective inner city teachers should receive some training that would, as

⁷A. C. Ornstein, "Anxieties and Forces which Mitigate Against Ghetto School Teachers," Journal of Secondary Education, 43:243-254 (October, 1968).

⁸H. L. Foster, "The Inner City Teacher and Violence: Suggestions for Action Research," Phi Delta Kappan, 50:172-175 (November, 1968).

⁹D. P. Howard, "The Needs and Problems of Socially Disadvantaged Children as Perceived by Students and Teachers," Exceptional Children, 34:327-335 (January, 1968).

Ornstein has stated, "provide . . . insights into the psychological and sociological problems of the disadvantaged."¹⁰

Flynn, based on his experiences in the Detroit Public Schools, wrote that, "A teacher working with children in a ghetto school, to use a loaded phrase, has to have sensitivities and perception and understanding of the most humane kind."¹¹

Consistently, the terms used by authors when stating the needs of inner city teachers are of an affective tone. Olsen concluded that:

If teachers are ever to work effectively with such children, (deprived) they must first come to know . . . the patterns of life, the value systems, and the motivational outlooks of these children as they live in their own daily environments.¹²

This view of cultural relativism does not mean adopting the ways and mores of another culture. Rather it means an awareness and acceptance as stated here by Ornstein:

Teachers need only to be made aware of the differences in cultural values without viewing one as right or better. Instead of reshaping the disadvantaged child, teachers should accept his culture and improve him within the scheme of his own values. Indeed, teachers should maintain

¹⁰A. C. Ornstein, "Improving Teachers for Slum Schools," Improving College and University Teaching, 16:120-123 (Spring, 1968).

¹¹F. A. Flynn, "Beginning at Hutchins Junior High," The Bulletin of the National Association of Secondary School Principals, 52:123-129 (October, 1968).

¹²E. G. Olsen, "Teacher Education for the Deprived: A New Pattern," School and Society, 95:232-234 (April 1, 1967).

their system of values, but, at the same time, respect and enhance the child's own values in order to reach him.¹³

The Affective Needs of Inner City Teachers

One trend in the study of the education of the culturally different has been to examine in microscopic fashion the traits of Blacks, Chicanos and Puerto Ricans, without ever holding a mirror up to the predominant white culture and its institutions.¹⁴ A different tack recommended by Smith¹⁵ and Carroll¹⁶ is that which is self-conscious, and that which allows prospective teachers to become more aware of their attitudes and beliefs by developing empathy for inner city people. Inman recommended that, "The preservice program of teacher education should seek to develop in each teacher a sense of genuine respect and empathy for the students."¹⁷

The task becomes one of preparing white, middle class teachers for their encounter with culturally different people. Consider this recollection of Chapman:

¹³A. C. Ornstein, "Reaching the Disadvantaged," School and Society, 96:214-216 (March 30, 1968).

¹⁴R. Wisniewski, "Urban Teacher Preparation Programs," Social Education, 33:77-82 (January, 1969).

¹⁵Smith, op. cit., p. 51.

¹⁶E. G. Carroll, "Adjusting Our Teaching--Adapting to Other Values," Elementary English, 46:172-173 (February, 1969).

¹⁷T. H. Inman, "Educating Teachers for the Disadvantaged," The Journal of Business Education, 43:268-269 (April, 1968).

I remember vividly the first day I was to report to work. For two weeks before this day I had nothing but apprehension about my job. I felt determined to go at least one day and if it didn't work out I would quit. My first professional duty was to appropriate classrooms. The room was crowded, hot and sticky with the high-pitched voices of constantly-talking students. To get over to the counselor's office I had to pass through a myriad of students. In order to get into the counselor's office I had to weave somehow through the unfamiliar crowd. All of a sudden I felt real panic inside. I was very much aware that at that moment I was the only white person in a room filled with two hundred strange faces. I had never been in a place with so many colored people, let alone in the minority. I thought I would suffocate or faint.¹⁸

That was certainly not an intellectual or academic problem that that young woman had to deal with. It was one of a lack of understanding of what it is like to live even a few brief moments as a minority. Had she any idea of what black or brown people go through every day of their lives in a predominantly white society, she would have gained some insight into her own feelings. The problem is ameliorated through a process of knowing oneself through knowing how others feel and perceive. As Redfield informed us:

For as one comes to understand people who live by institutions and values different from one's own, at the same time one comes to see that these people are nevertheless, like one's own people. The alien culture at first appears to us a mask, enigmatic or repugnant. On closer acquaintance we see it as a garment for the spirit; we understand its harmonies and appreciate them. Finally, as acquaintance goes deeper still, we do not see or for a time forget the

¹⁸

R. Chapman, "Teaching is Also Learning," The Bulletin of the National Association of Secondary School Principals, 52:23-27 (October, 1968).

culture, but look only to the common humanity of the men and women underneath.¹⁹

The Need to Prepare Empathic Teachers

Teaching is a vocation in which one becomes humanly involved with other people. Therefore, it is no surprise that Will found that, "treatises on effective teaching and teaching competence place a premium on the personal qualities possessed by the teacher."²⁰

Empathy, or social perception, is a basic personal quality that is desirable, necessary and, according to Katz, "almost always expected of the helping person if he is a professional and responsible individual."²¹

Effectiveness in teaching has been linked with this personal quality, although authors have referred to the quality as "sensitivity,"²² "understanding of others,"²³ "accuracy of social perception,"²⁴ "ability to empathize,"²⁵

¹⁹R. Redfield, "The Study of Culture in General Education," Social Education, 11:259-264 (1947).

²⁰Will, op. cit., p. 471.

²¹R. L. Katz, Empathy (New York: Free Press of Glencoe, 1963), p. ix.

²²B. J. Cratty, "The Assessment of Teacher Sensitivity," California Journal of Educational Research, 13:73-77 (March, 1962).

²³N. L. Gage, "Explorations in the Understanding of Others," Educational and Psychological Measurement, 13:14-26 (Spring, 1953).

²⁴N. E. Gronlund, "Social Perception and Teaching Effectiveness," The School Review, 63:277-283 (May, 1955).

²⁵H. H. Remmers, "A Qualitative Index of Social-Psychological Empathy," American Journal of Orthopsychiatry, 20:161-165 (January, 1950).

"ability to capture the 'spirit of a group,'"²⁶ as well as "empathy."²⁷

Some specific studies have addressed themselves to establishing correlational relationships between teaching effectiveness and empathy. Cratty found that "a significant and positive relationship exists between sensitivity to student reaction and classroom teaching success."²⁸

Results of a study by Gage and Suci led them to conclude that "teachers' accuracy of social perception is positively related to their effectiveness in eliciting positive affect in pupils."²⁹

Diskin studied empathic student teachers and their ability to conduct a classroom. His findings were that "student teachers that are high in individual predictive empathy are better able to maintain harmonious interpersonal relations in the classroom."³⁰

²⁶S. Lundstedt, "Criteria for Effective Teaching," Improving College and University Teaching, 14:27-31 (Winter, 1966).

²⁷O. Strunk, "Empathy: A Review of Theory and Research," Psychological Newsletter, 9:47-57 (1957).

²⁸Cratty, op. cit., p. 219.

²⁹N. L. Gage and G. Suci, "Social Perception and Teacher-Pupil Relationships," Journal of Educational Psychology, 42:144-152 (March, 1951).

³⁰P. Diskin, "A Study of Predictive Empathy and the Ability of Student Teachers to Maintain Harmonious Interpersonal Relations in Selected Elementary Classrooms" (unpublished Ph.D. dissertation, University of Michigan, 1956).

Dixon and Morse found a verification of their hypothesis that "individuals who have high empathic capacity as measured by pupils' responses are also seen as better teachers."³¹

Previous Approaches to the Definition and Study of Empathy

In conceptualizing empathy there has been some agreement, some overlapping and some divergence of meaning. In this sub-section a summary of those conceptual definitions of empathy and some other related terms as found in the review of the literature is presented. Conceptually, empathy has been defined as 1) imagined oneness, 2) detached comprehension, and 3) a multi-step process.

Empathy as Imagined Oneness.

Katz has written of empathy as the ability to assume an "as if" mode when dealing with others:

We see, we feel, we respond, and we understand as if we were, in fact, the other person. We stand in his shoes. We get under his skin. When a person empathizes he abandons himself and relives in himself the emotions and responses of another person. . . . in moments of empathy he experiences the keenest and most vivid sense of closeness or sameness with the other person.

We reverberate to the emotions of the other person and are no longer aware of our separate identity. We are involved in 'as-if' behavior.³²

³¹W. R. Dixon and W. C. Morse, "The Prediction of Teaching Performance: Empathic Potential," The Journal of Teacher Education, 12:322-329 (September, 1961).

³²Katz, op. cit., pp. 3-4, 5.

Others have described empathy as being this feeling of oneness with others. Dymond used empathy to denote "the imaginative transposing of oneself into the thinking, feeling and acting of another and so structuring the world as he does."³³ Meek defined empathy as "the capacity to put oneself in the place of another person."³⁴

Olden, when describing empathy, saw a merging of egos. She wrote, "The subject temporarily gives up his own ego for that of the object."³⁵

Stewart included the concept of identification in his definition of empathy when he stated, "He who empathizes goes beyond free imitation in a circle back to identification, but now he identifies deliberately . . ."³⁶ Warren also included the process of identification as part of the empathic state.³⁷

Jacob Moreno, the sociodramatist, described the concept of empathy graphically in the form of a poem prefacing one of his works:

³³R. F. Dymond, "A Scale for the Measurement of Empathic Ability," Journal of Consulting Psychology, 13:127-133 (April, 1949).

³⁴C. R. Meek, "An Experiment in Teaching Empathy," The Journal of Educational Sociology, 31:107-110 (October, 1957).

³⁵C. Olden, "On Adult Empathy with Children," Psychoanalytic Study of the Child, 8:111-126 (1954).

³⁶D. A. Stewart, "The Psychogenesis of Empathy," The Psychoanalytic Review, 41:216-228 (July, 1954).

³⁷H. C. Warren, Dictionary of Psychology (New York: Houghton Mifflin Company, 1934), p. 92.

A meeting of two: eye to eye, face to face,
 And when you are near I will tear your eyes out,
 And place them instead of mine,
 And you will tear my eyes out,
 And will place them instead of yours,
 Then I will look at you with your eyes,
 And you will look at me with mine.³⁸

Empathy as Detached Comprehension

Equally prevalent in the research and study of empathy is the conceptualization that empathy is an intellectualized awareness of another person's state of mind. Writers of this notion are careful to use words of a primarily cognitive tone to describe the empathic process. The usage of words such as, "comprehend," "apprehension," and "abstracting" is frequently noted.

Murphy defined empathy by contrasting it with sympathy. He said it was the "direct apprehension of the state of mind of another person without as in sympathy, feeling as he does."³⁹ English and English used almost exactly the same wording, but then went on to elaborate on empathy as an intellectual process:

Apprehension of the state of mind of another person without feeling (as in sympathy) what the other feels. While the empathic process is primarily intellectual, emotion is not precluded, but it is not the same emotion as that of the person with whom one empathizes . . . The attitude

³⁸ J. L. Moreno, Psychodrama (Vol. I) (Beacon, N.Y.: Beacon House, Inc., 1964), Preface.

³⁹ G. Murphy, An Introduction to Psychology (New York: Harper Brothers, 1951), p. 570.

of empathy is one of acceptance and understanding of an implicitly 'I see how you feel.'⁴⁰

Buchheimer recognized the affective nature of empathy, but pointed out that basically it is an "abstract process."⁴¹ Johnson also stated that the process of empathy yields a cognitive state when he wrote that empathy is to "enter another person's experience to comprehend what life means to him in his living adventure."⁴²

Empathy as a Multi-Step Process

A statement by Bonfenbrenner and others, regarding empathy indicated two parts to the empathic process. They said, "The process of sensing or responding to other people's thought and feelings is often referred to in this theoretical tradition as empathy."⁴³ This connotes that empathy is more than a feeling or an appreciation of a feeling held by others. Instead it infers that some further, perhaps enlightened action follows the sensing of the feeling of others.

⁴⁰H. B. English and A. C. English, A Comprehensive Dictionary of Psychological and Psychoanalytical Terms (New York: Longmans, Green and Company, 1958), p. 178.

⁴¹A. Buchheimer, "The Development of Ideas About Empathy," Journal of Counseling Psychology, 10:61-70 (1963).

⁴²P. E. Johnson, Personality and Religion (New York: Abingdon, 1957), p. 130.

⁴³U. Bonfenbrenner, J. Harding and M. Gallwey, "The Measurement of Skill in Social Perception," in Talent and Society, ed. by D. McClelland, et al. (Princeton: Van Nostrand, Inc., 1958), p. 29.

Lipps, who first used the term *Einfuhlung*, which has since been translated as empathy, saw the process as one including the sensing of a stimulus and reintegration of the stimulus by the empathizer.⁴⁴ Lipps differentiated between empathy and *Einsfuhlung*, which he saw as being the active seeking of commonality.⁴⁵

Fenichel described empathy as a process consisting of identification with the other person followed by an increased self-awareness.⁴⁶ Olden wrote of empathy as an act which has a back and forth quality to its essence, "an interchange of the emotional experience of feeling as the object does and intellectual process of observing, judging, and understanding."⁴⁷ Like Olden, Stein felt that empathy takes place in steps which have affective and cognitive qualities:

If (empathy) is an experience of being led by the foreign experience and takes place in three steps as follows: 1. the emergence of the experience, 2. the fulfilling explication and, 3. the comprehensive objectification of the experience.⁴⁸

⁴⁴Buchheimer, op. cit., p. 62.

⁴⁵Stewart, op. cit., p. 224.

⁴⁶O. Fenichel, The Psychoanalytic Theory of Neurosis (New York: W. W. Norton, 1945).

⁴⁷Olden, op. cit., p. 113.

⁴⁸E. Stein, On the Problem of Empathy (The Hague: Martinus Nijhoff, 1964), p. xiv.

Related Concepts

Empathy should not be confused with "identification" which is often unconscious,⁴⁹ and frequently not purposeful.⁵⁰

Also related to empathy is the act of projection. Projection, like identification, is unconscious and is, furthermore, "non-adaptive behavior."⁵¹ Norman and Ainsworth found that empathy and projection are negatively related and that empathy is more closely related to adjustment than is projection.⁵² In summarizing research in the area, Katz said that "errors in empathy are made by individuals who tend to project, who lack insight, who are ethnocentric, and who are hypochondriacal."⁵³

Summary

For the purposes of this study the following is typical of those descriptions of empathy which best lay theoretical support for the operational definition of empathy:

When we empathize in everyday experiences, we enjoy a sense of membership in the same group and participate in communications that are based on a

⁴⁹Strunk, op. cit., p. 49.

⁵⁰H. C. Smith, Sensitivity to People (New York: McGraw-Hill Book Company, 1966), p. 93.

⁵¹Strunk, op. cit., pp. 48-49.

⁵²R. D. Norman and P. Ainsworth, "The Relationships Among Projection, Empathy, Reality and Adjustment, Operationally Defined," Journal of Consulting Psychology, 18:53-58 (1954).

⁵³Katz, op. cit., p. 21.

common understanding of verbal symbols. In empathic understanding the practitioner not only appreciates symbols in the ways his subject does--he becomes the subject by making a trial identification.⁵⁴

Operational Definitions of Empathy

Usually when writing about an operational definition of empathy authors agreed on it being the ability to predict the responses of others.^{55,56}

Dymond, in some of the earlier studies of empathy, had people rate each other and predict the responses of each other as follows:

A rates himself
 A rates B as A sees him
 A rates B as he thinks B would rate himself
 A rates A as he thinks B would rate him
 B rates B
 B rates A as B sees him
 B rates A as he thinks A would rate himself
 B rates B as he thinks A would rate him.⁵⁷

Empathy on the part of one person toward a group of people has been noted as a "sensitivity to the generalized other" when a person is asked to predict such things as community attitudes.⁵⁸ Researchers have recommended the use of a standard other when asking a subject to

⁵⁴Katz, op. cit., p. 33.

⁵⁵Remmers, op. cit., p. 161.

⁵⁶Gage (1953), op. cit., p. 15.

⁵⁷Dymond, op. cit., p. 128.

⁵⁸Bonfenbrenner, et al., op. cit., p. 37.

predict the responses of others.^{59,60} However, it is possible that projection may be a part of this act of predicting for others. That is, a person may be projecting his or her views into the responses of others, rather than projecting himself or herself into the place of others and responding as they would. Projection has been operationalized as the degree to which a person's predictions for others are closer to his own than to the people for whom he is predicting.^{61,62}

Bender and Hastorf offered operational definitions following a study in which they made adjustments for this flaw in the measurement of empathy:

projection, the total item by item deviation of the forecaster's own responses from his predictions for an associate . . . the total deviations indicate projection . . . the smaller the deviation score, the greater the projection . . .

raw empathy, predicted responses compared with actual responses of associates . . . the smaller the deviation, the greater the raw empathy . . .

refined empathy, a comparison of the raw empathy score and the projection score. It's purpose is to show numerically whether S's predictions were closer to the responses of his associates or closer to his

⁵⁹N. L. Gage and L. J. Cronbach, "Problems in Interpersonal Perception," Psychological Review, 62:411-422 (November, 1955).

⁶⁰A. M. Anikeeff, Reciprocal Empathy: Mutual Understanding Among Conflict Groups (Lafayette, Indiana: Purdue University, Division of Educational Reference, 1951), p. 16.

⁶¹R. C. Cowden, "Empathy or Projection," Journal of Clinical Psychology, 11:188-190 (April, 1955).

⁶²A. H. Hastorf and I. E. Bender, "A Caution Respecting the Measurement of Empathic Ability," The Journal of Abnormal and Social Psychology, 47:574-576 (1952).

own responses. Subtract the raw empathy score from the projection score to get a refined empathy score.⁶³

Bender and Hastorf also found reason for using the refined empathy score over the raw empathy score, because "there is a significant negative relationship between projection and refined empathy."⁶⁴

These studies and findings by Bender and Hastorf are used as an integral part of the procedures described in Chapter III.

Empathy and Effectiveness in Social Interaction

Mead stressed the importance of taking the role of the other in building social cooperation among human beings.⁶⁵ Stewart pointed out that where mutual empathy exists, communication thrives.⁶⁶ Katz expanded on this notion, saying that when communication takes place on a deeper level, the people involved end up understanding each other more completely and accepting each other.⁶⁷ Several studies have been done relating empathic ability to effectiveness in social interaction. Speroff found

⁶³I. E. Bender and A. H. Hastorf, "On Measuring Generalized Empathic Ability (Social Sensitivity)," The Journal of Abnormal and Social Psychology, 48:503-506 (1953).

⁶⁴Ibid., p. 54.

⁶⁵Mead, op. cit.

⁶⁶Stewart, op. cit., p. 217.

⁶⁷Katz, op. cit., p. 7.

the faculty of empathy to be useful in resolving conflict situations.⁶⁸ Van Zelst and Waldman both found correlations between empathy and leadership.^{69,70} In a study of personality traits and empathy Dymond found empathic people to be optimistic, warm, emotionally mature and well-adjusted persons.⁷¹ Both Dymond and Halpern attempted to explain the correlation between empathy and self-satisfaction. Halpern stated:

The relationship between self-satisfaction and empathy suggests that a person who is at home with most of his own behavior is likely to be a better empathizer than those who are largely dissatisfied with themselves.⁷²

Stewart concluded that the empathizer can be creative in his or social interaction:

And he who can empathize will be a creator, for he will be freed of externally imposed rules of social prestige, and of professional status, and in this freedom he gives to his imitation the control and direction of his own personality.⁷³

⁶⁸B. J. Speroff, "Empathy and Role Reversal as Factors in Industrial Harmony," The Journal of Social Psychology, 37:117-120 (1953).

⁶⁹R. H. Van Zelst, "Validation Evidence of the Empathy Test," Educational and Psychological Measurement, 13:474-477 (Autumn, 1953).

⁷⁰H. Waldman, "Correlates of Empathy in Family Life Teachers" (unpublished Ed.D. dissertation, Columbia University, 1961).

⁷¹R. F. Dymond, "Personality and Empathy," Journal of Consulting Psychology, 14:343-350 (1950).

⁷²H. M. Halpern, "Empathy, Similarity and Self-Satisfaction," Journal of Consulting Psychology, 19:449-452 (December, 1955).

⁷³Stewart, op. cit., p. 226.

Katz stated something similar when he pointed out that empathic individuals are not bound up by rationality. According to Katz, "Empathy helps us to transcend the limits of our rational powers. When we empathize we are not confined to using the stock labels or descriptive words at our command."⁷⁴ Goodman postulated that empathy very importantly allows a person to look more objectively at himself.⁷⁵

The Empathizer as Role Player

The definition of role playing ability comes very close to defining the ability to empathize. According to McClelland, "The term role taking ability refers to the facility with which a person can perceive and act out organized behaviors or roles (i.e. putting himself in someone else's position)."⁷⁶ Cottrell concluded tentatively that when a person purposely takes on the role of another in a social situation he sharpens his perception, enhances his comprehension and increases his observational skills.⁷⁷

⁷⁴Katz, op. cit., p. 16.

⁷⁵H. Goodman, "Self-Insight, Empathy and Perceptual Distortion: A Study of the Relationships Between Measures of Self-Insight, Empathy and Perception Distortion as Defined by Ratings Made by Individuals" (unpublished Ph.D. dissertation, New York University, 1952).

⁷⁶W. A. McClelland, "A Preliminary Test of Role-Playing Ability," Journal of Consulting Psychology, 15:102-108 (April, 1951).

⁷⁷L. S. Cottrell, Jr., "Some Neglected Problems in Social Psychology," American Sociological Review, 15:705-712 (December, 1950).

Mead claimed that it is the social nature of the mind that requires each of us to empathize with others in the society.⁷⁸ Studies about role playing and social interaction have been done from both directions. For example, Gibb found that "role playing contributed to both the conceptualization of new roles and the taking of new roles in social situations."⁷⁹ On the other hand, McClelland said that:

Role playing ability is largely a product of social interaction . . . direct personal experience in social situations is the most important way in which the learning of these organized systems of behavior (or roles) takes place.⁸⁰

Stein related empathy to the formation of one's identity:

By empathy with differentially composed personal structures we become clear on what we are not, what we are more or less than others. Thus, together with self-knowledge, we also have an important aid to self-evaluation. Since the experience of value is basic to our own value, at the same time as new values are acquired by empathy, our own unfamiliar values become visible.⁸¹

Katz pointed out that when we take the roles of others, we close the social distance and thus form a stronger sense of identity.⁸²

⁷⁸Mead, op. cit., p. 300.

⁷⁹J. R. Gibb, "Effects of Role Playing Upon (a) Role Flexibility and Upon (b) Ability to Conceptualize a New Role," The American Psychologist, 7:310 (July, 1952).

⁸⁰McClelland, op. cit., p. 102.

⁸¹Stein, op. cit., p. 105.

⁸²Katz, op. cit., p. 33.

Experiential Learning and Attitudinal Change

Role Playing

Roles are not easily defined. That is, where one role stops and another role begins is difficult to delineate. Yet, individuals tend to see the world through what they come to believe is an exclusive view. As Moreno put it:

Every individual lives in a world which looks entirely private and personal to him and in which he partakes in a number of private roles. But, the millions of private worlds overlap in large portions. The larger portions which overlap are truly collective elements. Only the minor portions are private and personal.⁸³

The ability to empathize, as in role playing, becomes important when an individual finds himself in these overlapping situations calling for an understanding of role behaviors which may not be consonant.⁸⁴

Garvey defined and explained the usefulness of role playing as the:

Experience of 'being someone else.' It is employed to enable a person to attempt to understand the situation of another person, or it may be a fictitious role in which the player is seeking to acquire an understanding of relationships or of actions.⁸⁵

⁸³J. L. Moreno, Sociodrama: A Method for the Analysis of Social Conflict (New York: Beacon House, 1944), p. 2.

⁸⁴S. N. Herman and E. Schild, "Ethnic Role Conflict in a Cross-Cultural Situation," Human Relations, 13:215-228 (August, 1960).

⁸⁵D. M. Garvey, "Simulation, Role Playing, and Sociodrama in the Social Studies," The Emporia State Research Studies, 16:5-21 (December, 1967).

Studies have been done regarding role playing as a means for developing social understanding or empathy.

Garvey concluded that:

Even though the student may not be convinced of the adequacy of the position which he portrays he will usually develop a greater awareness and appreciation of the differences between his position and one which differs.⁸⁶

A study by Ross showed that subjects taking roles congruent with their initial attitudes grew stronger in the affirmation of their views; while those playing non-congruent roles tended to change their attitudes in directions away from their originally held views.⁸⁷ Janis and King's study support these findings and, further, they stated that when subjects verbalized an improvisation of their roles this tended to further increase the effectiveness of the attitude change.⁸⁸

Myers found that role playing and a discussion of it in a small group setting increased the empathy of the role players.⁸⁹ DeKock, in a study of high school students,

⁸⁶Ibid., p. 20.

⁸⁷J. L. Ross, "An Experimental Use of Simulation as a Training Technique for Collective Negotiations for Teachers" (unpublished Ph.D. dissertation, University of California at Los Angeles, 1968).

⁸⁸I. L. Janis and B. T. King, "The Influence of Role Playing on Opinion Change," Journal of Abnormal and Social Psychology, 49:211-218 (1954).

⁸⁹C. L. H. Myers, "An Experiment in the Development and Measurement of Empathy in Social Work Students" (unpublished Ph.D. dissertation, Washington University, 1966).

found that playing the role of a minority person brought about positive changes in racial attitudes.⁹⁰

Sociodrama

Role playing can be used to study individual problems or to investigate problems in a social context. Moreno has termed roles which represent collective ideas and experiences "sociodramatic roles."⁹¹ Sociodrama is a learning technique that uses role playing in order to give the learners some experience dealing with a particular social problem. Garvey described sociodrama as involving "a situation to which an acceptable solution must be devised by the actors or role-players."⁹² Garvey continued to outline the intended outcomes of sociodrama and differentiate it from simple role playing:

After a suitable warmup period, the pupils are permitted to proceed with the sociodrama in an effort to achieve both a solution to the issue and an understanding of the roles of the individuals involved in the situation. It is apparent that sociodrama is more highly structured than role-playing alone, and that a slightly greater demand is placed upon the teacher to prepare the initial description of the situation.⁹³

Moreno, who is a pioneer in the fields of psychodrama and sociodrama, noted that the use of sociodrama is

⁹⁰P. DeKock, "Simulation and Changes in Racial Attitudes," Social Education, 33:181-183 (February, 1969).

⁹¹Moreno (1944), op. cit., p. 3.

⁹²Garvey, op. cit., p. 8.

⁹³Ibid., p. 10.

particularly appropriate for dealing with intergroup relations as between blacks and whites. Sociodrama allows the players not only to explore, but to treat conflicts which may exist between groups of different cultural backgrounds.⁹⁴

Educational Games

James Coleman wrote about games and saw them as being:

A kind of play upon life in general. It induces, in a restricted well-defined context, the same kinds of motivation and behavior that occur in the broader contexts of life where we play for keeps.⁹⁵

Clark Abt stated, "Reduced to its formal essence, a game is an activity among two or more independent decision-makers seeking to achieve their objectives in some limiting context."⁹⁶

Dawson basically agreed with Abt's definition, but added that the component of competition is generally present in games.⁹⁷

In educational simulation the game concept, according to Ogunniyi, is "a model which provides stimulating

⁹⁴Moreno (1944), op. cit., p. 6.

⁹⁵J. S. Coleman, "Social Processes and Social Stimulation Games," in Simulation Games in Learning, ed. by S. S. Boocock and E. O. Schild (Beverly Hills: Sage Publications, Inc., 1968), p. 29.

⁹⁶C. Abt, Serious Games (New York: Viking Press, 1970), p. 6.

⁹⁷R. E. Dawson, "Simulation in the Social Sciences," in Simulation in the Social Sciences, ed. by H. Guetzkow (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), p. 9.

mimetic practice for students about gamed situations of real life."⁹⁸ Moreover, Ogunniyi concluded that an educational game is different from a parlor game in that "an educational game has specific instructional objectives to which the student must be oriented at the beginning of the game. Also, educational games end with debriefing."⁹⁹

Although educational games usually have stated objectives, they offer a freedom to improvise not available in a computerized game or a mathematical model of a situation. As Raser stated:

There is more leeway with respect to analogical consistency and strictness. The rules for translating 'real life' variables into simulation variables are less demanding, so it is possible to 'play around' a bit and 'make do,' . . .¹⁰⁰

Games are useful learning techniques for testing available strategies in a social situation,¹⁰¹ or for studying some of the basic principles of human behavior.¹⁰²

The advantages of games or gaming in an educational sense are that they increase interest and motivation, allow the participants to take active part, thereby applying and

⁹⁸O. Ogunniyi, "The Methodology of Educational Simulation and a Design of Simulated Instructional Model for Occupational Education" (unpublished Ph.D. dissertation, Michigan State University, 1969), p. 156.

⁹⁹Ibid., pp. 156-157.

¹⁰⁰J. R. Raser, Simulation and Society: An Exploration of Scientific Gaming (Boston: Allyn and Bacon, Inc., 1969), p. 32.

¹⁰¹W. D. Coplin, Simulation in the Study of Politics (Chicago: Markham Publishing Co., 1968).

¹⁰²Raser, loc. cit.

testing knowledge and all of this within a context which is a simplified version of the complex real world.^{103,104,105}

Simulation

Rogers has defined simulation as an experiential type of learning which is, in effect, a complex form of role playing.¹⁰⁶ In support of this notion, Cruickshank has offered a definition of simulation which is much like Moreno's concept of sociodrama:

Simulation may be defined as the creation of realistic games to be played by participants in order to provide them with life-like problem solving experiences related to their present or future work.¹⁰⁷

Garvey agreed that simulation incorporates both role playing and sociodrama, but that it usually also includes the element of a game.¹⁰⁸ Garvey went on to point out that simulation may be all-man, man-computer, or all computer.¹⁰⁹

¹⁰³Raser, op. cit., p. 115.

¹⁰⁴Abt, op. cit., p. 13.

¹⁰⁵Coleman, loc. cit.

¹⁰⁶C. R. Rogers, "What Psychology Has to Offer to Teacher Education," Mental Health and Teacher Education, Yearbook of the Association for Student Teaching (Dubuque, Iowa: W. C. Brown Co., Inc., 1967).

¹⁰⁷D. R. Cruickshank, "Simulation: New Directions in Teacher Preparation," Phi Delta Kappan, 48:23-24 (September, 1966).

¹⁰⁸Garvey, op. cit., p. 11.

¹⁰⁹Ibid., p. 8.

Without using the other, previously defined, terms Tansen and Unwin stated, "Simulation is a simplified version of an actual situation in which it is possible to arrange occurrences as they are needed."¹¹⁰ Simulations are simplifications and purposely so. They are abstractions of reality presented to the learner so that the learner can perceive the situation with more clarity than exists in the referent system.¹¹¹

The function of an educational simulation is to provide realistic instruction and to allow an individual to apply gained knowledge in this life-like, problem solving situation.¹¹²

Raser has pointed out that among its advantages simulation is cheaper, costly mistakes can be avoided, more phenomena are observable and with clarity, a manipulatable system is presented and the learners are protected in safety.¹¹³ Other advantages are that the simulator can compress or expand real time, and the experimenter can study process in ways that nature prohibits.¹¹⁴ Also, a recent study showed that:

¹¹⁰P. J. Tansen and D. Unwin, "Simulation Gaming: Bridge Between Theory and Practice," The Times Educational Supplement, June 21, 1968, p. 2077.

¹¹¹Raser, op. cit., p. 10.

¹¹²Ogunniyi, op. cit., pp. 154, 156.

¹¹³Raser, op. cit., pp. 15-18.

¹¹⁴Dawson, op. cit., pp. 12, 13.

'Practicing' in a simulated environment gave some players greater confidence in their ability to control social situations, at the same time that they acquired a more realistic view of what the situation was like and saw the necessity for further learning about it.¹¹⁵

Summary of Experiential Learning

Although efforts have been made in the preceding paragraphs to distinguish role playing, sociodrama, games and simulation from each other, their similarities should also be remembered:

1. Each one utilizes a symbolic model
2. Each one requires the student to define the problem, to determine the available alternative solutions and the possible consequences of those alternatives
3. Each one enables the student to receive practice in decision-making devoid of danger if an incorrect judgement is made . . .¹¹⁶

Boocock, in an illustrative paragraph pointed out a connection between what is being done today in educational simulation as being based in the philosophy of John Dewey:

The core principles of the technique--e.g. the active and simultaneous participation of all students in an educational game, with the teacher in the role of aid rather than judge; the internal rather than external locus of rewards, and thus motivation, in a game; and the linking of the student to the outside world through the simulated environment, which, by

¹¹⁵S. S. Boocock, "An Experimental Study of the Learning Effects of Two Games with Simulated Environments," in Simulation Games in Learning, ed. by S. S. Boocock and E. O. Schild (Beverly Hills: Sage Publications, Inc., 1968), p. 129.

¹¹⁶Garvey, op. cit., p. 9.

'reproducing the conditions of real life' within the classroom allows him to practice taking the kinds of roles and making the kinds of decisions he will face in his own later life--can all be traced to one or another of Dewey's works.¹¹⁷

Attitude Change

It was assumed for this study that the conditions under which attitude change were to take place would have to be of a non-threatening nature and secondly that the medium for inducing affective change would have to be itself primarily affective. The latter part of this assumption is supported by Will, who stated that:

Qualities such as responsibility, sensitivity, openness to experience, and acceptance of self and others . . . are developed when the individual witnesses or is involved in emotionally charged situations with meaningful others.¹¹⁸

A study by King and Janis indicated that when a person is given a role to defend and is further encouraged to improvise new supporting ideas in defense of this view, that person will gain in understanding of that point of view.¹¹⁹ Researchers in the field of attitudinal changes have recognized the non-threatening manner of experiential learning where role playing is involved. Abt pointed out

¹¹⁷S. S. Boocock, "From Luxury Item to Learning Tool--An Overview of the Theoretical Literature on Games," in Simulation Games in Learning, ed. by S. S. Boocock and E. O. Schild (Beverly Hills: Sage Publications, Inc., 1968), p. 57.

¹¹⁸Will, op. cit., p. 472.

¹¹⁹B. T. King and I. L. Janis, "Comparison of the Effectiveness of Improvised Versus Non-Improvised Role Playing in Producing Opinion Changes," Human Relations, 9:177-186 (1956).

the risk-free nature of games.¹²⁰ Boocock referred to the relative safety of role playing,¹²¹ while Cruickshank mentioned that simulation offered a realistic setting in which student teachers could make decisions without fear of censure or failure.¹²² In a study by Lindquist, it was inferred that those participating in a simulation reacted in a less threatening manner.¹²³

Summary

After reviewing the literature in the pertinent theoretical traditions it is concluded that: 1) The need for affective preparation of inner city teachers is crucial; 2) Although the research on empathy has been diverse, certain ways for operationalizing the concept have advantages over others; 3) Sociodramatic games involving simulated environments and role playing offer an emotionally charged, yet non-threatening setting for allowing affective change to occur; and 4) A careful examination of studies in the field of inner city teacher education has shown that there have been no studies attempting to bring about

¹²⁰Abt, op. cit., p. 13.

¹²¹Boocock, "From Luxury Item to Learning Tool," op. cit., p. 59.

¹²²Cruickshank, op. cit., p. 23.

¹²³G. W. Lindquist, "Utilization of Simulation and Group Counseling in the Training of Prospective Elementary School Teachers" (unpublished Ph.D. dissertation, Arizona State University, 1969).

changes in empathic ability in prospective inner city teachers, nor any studies using the sociodramatic or simulation method of role playing to increase empathy in teachers.

CHAPTER III

DESIGN OF THE STUDY

This chapter presents descriptions of the general methods, the sample and population, the instrument and measures, the experimental design, treatment procedures, research hypotheses, the analysis method, and the limitations of the study.

General Methods

In the investigation and development of this research problem on the effectiveness of a method for developing the empathic ability of prospective inner city teachers, the following methods were used. After determining the study problem, the author reviewed the publications in the areas of empathy, simulation, sociodrama and inner city teacher education. As a result of finding a dearth of research and methods used to develop this affective quality of empathy in teachers, the writer was convinced that a method should be refined and assessed for its effectiveness in the educational preparation of prospective inner city teachers.

The study was based upon an analysis of data gathered from subjects who participated in the Washington Heights Simulation Game (WHSG), from subjects of control groups and from a norm group of inner city residents. The results of this analysis are used to make recommendations and to draw implications for further research.

Sample

The sample for this study was drawn from a population of prospective inner city teachers. This included students enrolled in graduate and undergraduate courses in the College of Education at Michigan State University, and students enrolled in an undergraduate course at Flint Junior College. All those taking part in the runs of the WHSG as part of this study, expressed an interest in the inner city, and voluntarily participated in the game. The population is defined as prospective inner city teachers, in that, at the time when the subjects participated in the WHSG they were all potential candidates for teaching in the inner city.

The sample drawn from this population consisted of nine groups. Eight groups were composed of students enrolled in courses in the College of Education at Michigan State University; three groups were students enrolled in the final undergraduate education course in the professional sequence, School and Society; two groups were students enrolled in the Secondary Methods block of the undergraduate sequence; one group from a graduate education

course in Social Studies Methods; one group from a graduate education course in Crucial Issues. One group was composed of students from an undergraduate Sociology course at Flint Junior College.

Instrument and Measures

A review of the literature turned up no adequate instrument which assesses the degree of empathy on the part of prospective inner city teachers for inner city residents. Nor is there available an adequate instrument which measures generalized empathy of an individual for a group.

In the Sixth Mental Measurements Yearbook, Brayfield said that there had been "insufficient and inadequate data to believe that the construct 'empathy' had been isolated in the 'Diplomacy Test of Empathy.'"¹

In the Fifth Mental Measurements Yearbook, Thorndike said that "'The Empathy Test' cannot be recommended as either a useful practical device or contribution to the description and understanding of an individual."²

Therefore, the construct of empathy was operationalized, using the responses of treatment, control and norm groups to an attitude inventory.

¹A. H. Brayfield, "Review of the Diplomacy Test of Empathy," in Sixth Mental Measurements Yearbook, ed. by O. K. Buros (Highland Park, N.J.: The Gryphon Press, 1965), p. 187.

²R. L. Thorndike, "Review of The Empathy Test," in Fifth Mental Measurements Yearbook, ed. by O. K. Buros (Highland Park, N.J.: The Gryphon Press, 1959), p. 52.

The instrument used in this study was developed specifically for this study by the author and is named the Flynn Attitude Inventory (FAI). Fifty items were written by the author (see Appendix B). The items were statements of attitudes pertaining to the conceptions of minority people with a special emphasis on black people and the milieu of the inner city. Instructions directed respondents to agree or disagree with the statements on a six point scale. The original fifty items were tested on a group of thirty-four inner city residents of the city of Detroit. This group ranged in age from 18 to 35. The group was 95 per cent black, and included both males and females. Members of this group came from areas of Detroit known as "hard core" sections of the city.

Of the original fifty items tested, twenty items were finally chosen (see Appendix C). These items were chosen on the basis of the least in-group variability. Simply stated, the items finally chosen were ones on which there was the most agreement as to the response among members of the group (items having the least standard deviation within the group).

Treatment

The following is a brief description of the Washington Heights Simulation Game. A complete description can be found in Appendix A.

The Washington Heights Simulation Game (WHSG) is a sociodramatic learning experience designed to develop in prospective inner city teachers a feeling for powerlessness and its accompanying frustrations, similar to that felt by people of minority groups in the inner cities of America. Players act out the roles of Xenoos, a minority group, and try to better the social, living conditions of their community, Washington Heights. Participants frequently say that following the game they feel that they have a better understanding, emotionally, of the plight of blacks in the inner city, whereas before their awareness was primarily intellectual.

Experimental Design

The experimental design consisted of nine treatment groups with matching control groups. Each group responded to the FAI twice. The first time respondents were told to respond in keeping with their personal beliefs. The second time they were told to respond the way they thought inner city people would respond. (For an exact wording of the directions see Appendix D.) Both sets of responses were gathered from eight of the groups following participation in the WHSG. One more group that received the treatment responded to the FAI twice before and twice after participation in the WHSG. This group was part of the total design of the study, but was also used to gather data to determine whether the administration of the FAI prior to the WHSG would bring about an increased empathy on the part

of the group. Each time the game was run, the following responses for each item on the FAI were gathered from each group:

	Treatment	Control
Self	x	y
Inner City	xx	yy

The self (x,y) responses and inner city (xx,yy) responses were compared with the norm group (n) and the self and inner city responses were compared with each other.

This information was calculated for each item as follows:

to determine similarity³

n-x

n-y

to determine projection⁴

x-xx

y-yy

to determine raw empathy⁵

n-xx

n-yy

to determine refined empathy⁶

(x-xx) - (n-xx)

(y-yy) - (n-yy)

³For operational definitions of these terms see Chapter I.

⁴Ibid.

⁵Ibid.

⁶Ibid.

In each of the four measures the item-by-item deviations were totaled giving a single number for each measure for each group. Control groups were then compared with experimental groups for each measure.

Procedures

Each experimental group participated in the Washington Heights Simulation Game (WHSG).⁷ This included a briefing session covering the objectives of the game, the actual playing of the game and a debriefing session following the game. The instrument used for gathering data was administered following the playing of the game and before the debriefing session. This decision was made since the debriefing sessions are somewhat personalized and since it is more likely that this part of the experience is less predictable and more spontaneous.

Statistical Hypothesis

To evaluate the effectiveness of the WHSG in the development of empathic ability on the part of the prospective inner city teachers taking part in the study, five statistical hypotheses were generated and tested. Each null hypothesis is presented.

Null Hypothesis₁:

No difference will be found between the mean similarity scores of experimental groups and control groups as measured using the FAI.

⁷A complete description of the WHSG is found in Appendix A.

Symbolically: $\mu_T = \mu_C$

Null Hypothesis₂:

No difference will be found between the mean projection scores of experimental groups and control groups as measured using the FAI.

Symbolically: $\mu_T = \mu_C$

Null Hypothesis₃:

No difference will be found between the mean raw empathy scores of the experimental groups and control groups as measured using the FAI.

Symbolically: $\mu_T = \mu_C$

Null Hypothesis₄:

No difference will be found between the mean refined empathy scores of the experimental groups and control groups as measured using the FAI.

Symbolically: $\mu_T = \mu_C$

Null Hypothesis₅:

No difference will be found between the mean scores of that experimental group which received a pre-test and those experimental groups which did not.

Symbolically: $\mu_{T(1,2,3,,8)} = \mu_{T(9)}$

Analysis

The group was used as the unit of measure due to the interaction of the subject participants in the simulation game. Inbar has pointed out that the impact of a

game "seems very much to be a group phenomenon rather than a purely individual learning process."⁸

The responses to the FAI were used to assign scores for the operational definitions to each group. For example, all the responses for the people in Group 1 (the first experimental group) to item #1 on the FAI, when they were asked to respond in keeping with their personal beliefs, were added in order to obtain the mean response for that group to that item. The mean response (call it x_1) was then compared with the mean response of the norm group on that item (call it n_1) to obtain the similarity measure. Next, the mean response, x_1 , was compared with the mean response of the same group when they responded the way they thought inner city people would respond, xx_1 , in order to gain the projection measure. Following this the xx_1 response was compared with how the inner city people actually did score on that item, n_1 , in order to gain the raw empathy measure. The refined empathy measure was obtained by subtracting the raw empathy measure from the projection measure. Each of these measures for each item was totaled for each group yielding a single number to be known respectively as the similarity score, the projection score, the raw empathy score and the refined empathy score. The mean scores of the treatment groups and the control

⁸M. Inbar, "Individual and Group Effects on Enjoyment and Learning in a Game Simulating a Community Disaster," in Simulation Games in Learning, ed. by S. S. Boocock and E. O. Schild (Beverly Hills: Sage Publications, Inc., 1968), p. 182.

groups were then compared by using a correlated t-test and using the .05 level of significance. This meant that the researcher would tolerate a 5 per cent probability of being wrong when stating that a difference existed.

Limitations

This study has certain limitations that should be recognized if the data presented are to be intelligently interpreted.

One obvious limitation is that measuring attitudes or a characteristic such as empathy immediately following a two and one-half hour experience may not indicate a permanent change in attitudes or the ability to predict the attitudes of others.

The generalizability of the population is limited to prospective inner city teachers of at least college age. The treatment designed for this study, the WHSG, was not meant for use with high school age students or for people who are not interested in education for the inner city.

Any implications drawn from the results of this study for the application of this method for dealing with the problem of affective inner city teacher education to other areas of study would have to be drawn with the greatest care and caution.

Every attempt has been made in this study to recognize these limitations, to minimize their effect whenever possible, and to draw conclusions and implications from the data in view of these limits.

Summary

In this study nine experimental groups were administered a treatment, the Washington Heights Simulation Game, in order to test the effectiveness of this game in developing an empathic response on the part of prospective inner city teachers for residents of the inner city. Following participation of each group in the WHSG, data was gathered through the use of the Flynn Attitude Inventory. In the case of one experimental group the FAI was also administered before participation in the WHSG, in order to determine whether the administration of the FAI increased the empathic ability beyond that of the other experimental groups. The same data was gathered from control groups that did not participate in the WHSG. The data was measured to obtain similarity, projection, raw empathy and refined empathy scores for each group. Comparisons were made between those groups of prospective inner city teachers who participated in the WHSG and those which did not using a correlated t-test and the .05 level of significance.

CHAPTER IV
PRESENTATION AND ANALYSIS
OF THE DATA

In this chapter information regarding the construction of the instrument, the gathering of the data, the testing of the null hypotheses, and further results are presented.

Inventory Items

The implementation of the design of this study began with the testing of items for the Flynn Attitude Inventory (FAI) on a norm group of inner city people. Following testing, items were selected on the basis of their standard deviation. In most cases inventory items are selected because their responses have a high standard deviation indicating a wide range of attitudes expressed by respondents. For the purposes of this study, however, the items selected were the ones having the lowest standard deviation within the norm group. This was done because later in the study subjects were asked to predict how inner city people (the norm group) would respond to the items. Therefore, it was important to select items

that the inner city people agreed upon. The mean responses to each of the twenty items on the FAI by the norm group can be found in Appendix C.

Also, in constructing the FAI care was taken to balance the number of items eliciting agreement with items eliciting disagreement and to mix these items with each other.

Following participation in the Washington Heights Simulation Game (WHSg) subjects were seated and asked to complete the FAI. They were told that the information gathered from the inventories would be used for research purposes only and that it would in no way influence grades or evaluations for the course they were enrolled in. Subjects were given a copy of the FAI which had been marked "S" for "Self" and were asked to fill it out in keeping with their personal beliefs. After collecting the "S" inventories, subjects were given another copy of the FAI, but this one was marked "I" for "Inner City." Subjects were told to respond to this copy of the FAI as they thought a resident of the inner city might respond to it. The same procedures were used for collecting data from control groups.

When subjects responded to the items on the FAI they did so by placing an "X" in a box next to an item indicating agreement or disagreement on a six-point scale. Each point on the scale was designated verbally:

"STRONGLY AGREE," "SLIGHTLY AGREE," "AGREE," "DISAGREE," "SLIGHTLY DISAGREE," "STRONGLY DISAGREE." These boxes were assigned numbers from one to six, e.g., STRONGLY AGREE = 1, and STRONGLY DISAGREE = 6.

Testing the Null Hypotheses

Data were gathered from nine experimental groups and their associated control groups. The mean responses for each group on each item were found by coding the data (e.g., an "X" under SLIGHTLY AGREE becomes a "2"), punching the data onto cards and programming it into the 3600 computer at the Michigan State University Computer Center. The means from each group for each item were recorded. Treatment groups were then compared with control groups for differences.* A t-test was selected as the appropriate method of analysis since a comparison of the dependent means of two groups was being carried out. The level of significance was set at $p < .05$, indicating that the writer was willing to tolerate a 5 per cent chance that the differences shown occurred by chance alone.

Null Hypothesis₁: No difference will be found between the similarity scores of experimental groups and control groups.

Alternate Hypothesis₁: Groups receiving the experimental treatment will have higher similarity scores

*Raw scores and differences by group can be found in Appendix D.

as measured using the FAI than groups not participating in the WHSG.

Time	Difference (Treatment-Control) in Similarity Scores
1	1.63
2	12.04
3	5.04
4	6.05
5	6.66
6	10.71
7	7.32
8	2.70
9	5.88

The above scores were calculated using a t-test with seven degrees of freedom:

$$t_{7df} = \frac{\Sigma d/n}{\frac{\sqrt{\frac{n\Sigma d^2 - (\Sigma d)^2}{n(n-1)}}}{\sqrt{n}}}$$

The mean difference of 5.78 on similarity scores was sufficient to reject the null hypothesis and accept the alternate hypothesis at the .001 level of significance with seven degrees of freedom.

Null Hypothesis₂: No difference will be found between the mean projection scores of experimental groups and control groups as measured using the FAI.

Alternate Hypothesis₂: Groups receiving the experimental treatment will differ from groups not participating in the WHSG on projection scores as measured using the FAI.

Time	Difference (Treatment-Control) in Projection Scores
1	-4.64
2	-5.06
3	-6.15
4	-6.55
5	-4.64
6	-9.04
7	-6.71
8	-1.14
9	-3.04

The above scores were calculated using a t-test with seven degrees of freedom. The mean difference of -6.87 on projection scores was sufficient to reject the null hypothesis at the .001 level of significance with seven degrees of freedom. Upon investigation it was shown that experimental groups had higher projection scores than control groups.

Null Hypothesis₃: No difference will be found between the mean raw empathy scores of the experimental groups and control groups as measured using the FAI.

Alternate Hypothesis₃: Groups receiving the experimental treatment will differ from groups not participating in the WHSG on raw empathy scores as measured using the FAI.

Time	Difference (Treatment-Control) in Raw Empathy Scores
1	.06
2	1.40
3	1.24
4	1.04
5	.09
6	- .02
7	.32
8	2.03
9	- .57

The above scores were calculated using a t-test with seven degrees of freedom. The mean difference of 1.80 on raw empathy scores is significant at the .2 level and therefore was not sufficient to reject the null hypothesis at the .05 level of significance. An investigation showed that experimental groups had slightly higher, although not significantly higher, raw empathy scores than control groups.

Null Hypothesis₄: No difference will be found between the mean refined empathy scores of the experimental groups and control groups as measured using the FAI.

Alternate Hypothesis₄: Groups receiving the experimental treatment will differ from groups not participating in the WHSG on refined empathy scores as measured using the FAI.

Time	Difference (Treatment-Control) in Refined Empathy Scores
1	-3.26
2	-3.66
3	-5.60
4	-6.94
5	-4.02
6	-9.19
7	-5.48
8	-2.48
9	-2.11

The above scores were calculated using a t-test with seven degrees of freedom. The mean difference of -3.84 on refined empathy was sufficient to reject the null hypothesis at the .01 level of significance with seven degrees of freedom. Upon investigation it was shown that experimental groups had lower refined empathy scores than control groups.

Null Hypothesis₅: No difference will be found between the mean scores of that experimental group which received a pre-test and post-test and those experimental groups which received the post-test only.

Alternate Hypothesis₅: The group receiving the pre-test and post-test will have higher similarity and refined empathy scores than those groups which received the post-test only.

An inspection of the data cells as given in this chapter indicated that the null hypothesis was tenable.

A further calculation beyond the stated hypotheses provided more results. The researcher selected ten items from the attitude inventory which more than others pertained to the WHSG. The items selected were: 3, 4, 5, 6, 7, 13, 16, 17, 19, and 20. Item number 3 reads, "Special provision should be made for participation of minorities in government." Item number 16 reads, "Inner city residents should have community control of their schools." The mean differences were obtained using a t-test as was done for hypotheses 1-4. These differences are presented with levels of significance for comparison with the data for all the items:

	Similarity		Projection		Raw Empathy		Refined Empathy	
	dif.	lvl. sig.	dif.	lvl. sig.	dif.	lvl. sig.	dif.	lvl. sig.
All Items	5.78	.001	-6.87	.001	1.80	.2	-3.84	.01
Selected Items	6.66	.001	-6.40	.001	1.62	.2	-2.49	.05

It can be observed that the similarity difference is stronger in the direction of hypothesis 1 when considering selected items. While the projection and raw empathy appear to have held at their significance levels, the refined empathy difference has moved in the direction of control groups having somewhat lower differences.

Summary

The data was gathered using the FAI, the items of which were field tested on an inner city norm group and selected on the basis of the lowest standard deviation. In gathering the data subjects remained anonymous and were assured that the information would be used for research purposes only.

A correlated t-test was used to analyze the data. This test was found to be acceptable in this study which is comparing the dependent means of treatment and control groups. The level of significance was set at $p < .05$.

Tests were made of the null hypotheses of the study, and were accepted or rejected on the basis of the data collected at the level of significance. A restatement of the hypotheses is now made, followed by a statement of support or non-support.

Hypothesis 1

Groups of prospective inner city teachers which participated in the Washington Heights Simulation Game (WHSG) will respond to the Flynn Attitude Inventory (FAI)

more similar to the way a group of inner city people respond to the FAI than groups of prospective inner city teachers which do not participate in the WHSG.

The hypothesis was supported.

Hypothesis 2

Groups of prospective inner city teachers which participated in the WHSG will not project as much when responding to the FAI the way they think inner city people would respond to the inventory, as groups which did not participate in the WHSG.

The hypothesis was not supported.

Hypothesis 3

Groups of prospective inner city teachers which participated in the WHSG will express greater raw empathy for inner city people than will groups which did not participate in the WHSG.

The hypothesis was not supported.

Hypothesis 4

Groups of prospective inner city teachers which participated in the WHSG will express greater refined empathy for inner city people than will groups which did not participate in the WHSG.

The hypothesis was not supported.

Hypothesis 5

A group of prospective inner city teachers who received the FAI as a pre-test before participation in the WHSG will have higher similarity and refined empathy scores than those groups of prospective inner city teachers who participated in the WHSG and received the FAI as a post-test only.

This hypothesis was not supported.

Further calculation of selected items of the FAI, which were considered by the researcher to be particularly pertinent to the objectives of the WHSG, showed the differences of the refined empathy scores of the control groups to be not as strong as when considering all items.

CHAPTER V

SUMMARY, FINDINGS AND RECOMMENDATIONS

In this chapter a summary of the study, a discussion of the findings and recommendations for further study are presented.

The Study

The purpose of this study was to assess the effectiveness of an original, sociodramatic game, the Washington Heights Simulation Game, in developing the empathic ability of prospective inner city teachers. Since the theoretical basis of empathy is new, and since there is little or no methodology for preparing teachers in this most crucial affective ability, this study utilized a refined conceptual definition of empathy in an experiment that might add to the small supply of methods conducive to cross-cultural understanding in the teaching/learning situation.

After reviewing the literature in the pertinent theoretical traditions it was concluded that the need for affective preparation of inner city teachers is

crucial. Although the research on empathy has been diverse, certain ways for operationalizing the concept have advantages over others. Sociodramatic games involving simulated environments and role playing offer an emotionally charged, yet non-threatening setting for allowing affective change to occur. A careful examination of studies in the field of inner city teacher education has shown that there have been no studies attempting to bring about changes in empathic ability in prospective inner city teachers, nor any studies using the socio-dramatic or simulation method of role playing to increase empathy in teachers.

In this study nine experimental groups were administered a treatment, the Washington Heights Simulation Game, in order to test the effectiveness of this game in developing an empathic response on the part of prospective inner city teachers for residents of the inner city. Following participation of each group in the WHSG, data were gathered through the use of the Flynn Attitude Inventory. The preliminary items of the FAI were field tested on an inner city norm group and the final items were selected on the basis of the lowest standard deviation. In the case of one experimental group the FAI was also administered before participation in the WHSG, in order to determine whether the administration of the FAI increased the empathic affect beyond that

of the other experimental groups. The same data were gathered from control groups that did not participate in the WHSG. The data were measured to obtain similarity, projection, and raw and refined empathy scores for each group. Comparisons were made, using a correlated t-test and the .05 level of significance, between those groups of prospective inner city teachers who participated in the WHSG and those which did not. The correlated t-test was found acceptable in this study which is comparing the dependent means of treatment and control groups.

Tests were made of the null hypotheses of the study and were accepted or rejected on the basis of the data collected at the level of significance. Groups which participated in the WHSG were significantly different from control groups in their similarity to the inner city norm group. Treatment groups also projected more than control groups when responding to the FAI as they thought inner city people would respond to the items. Although treatment groups expressed a greater raw empathy than control groups, the difference was significant at the .2 level and therefore not sufficient to reject the null hypothesis. Experimental groups had lower refined empathy scores than control groups. Administering the FAI to an experimental group before playing the WHSG showed no differences, when compared with other experimental groups, on the similarity and refined empathy scores.

Further calculation of selected items of the FAI, which were considered by the researcher to be particularly pertinent to the objectives of the WHSG, showed the differences of the refined empathy scores of control groups to be less significant than when considering all items.

Discussion of the Findings

The results of the test of the first hypothesis of this study indicated that the Washington Heights Simulation Game, a sociodramatic method involving a simulated environment and role playing, is an effective technique for inducing groups of prospective inner city teachers to express attitudinal responses similar to those of inner city people.

After testing the second hypothesis it was inferred that experimental groups projected significantly more than did control groups. The results of the projection hypothesis may be attributed to a number of factors. First, a case was made in Chapter II that projection is non-adaptive behavior. This conclusion had been arrived at when considering the empathic response between two associates. In order to correct for projection, Bender and Hastorf recommended separating the projection score from the raw empathy score, resulting in a refined empathy score.¹ However, in the present study the empathic

¹Bender and Hastorf, op. cit.

response was observed between dissimilar people. Projection was the difference between how a group personally responded to an item on the FAI and how they thought inner city people might respond to the FAI. The smaller the difference, the greater the projection. No allowance was made for accurate projection. Bender and Hastorf recognized the severity of this method of analysis in their study.² Perhaps this is too rigorous a method when dealing with dissimilar viewpoints, especially when there is an anticipated change in one of the viewpoints.

Secondly, projection was used as the base from which to subtract raw empathy (the accuracy of a group's predictions for inner city people) in order to obtain a refined empathy score. Therefore, it is suggested that refined empathy could also be considered to be the difference between raw empathy and projection with a correction for accurate projection, or a perceived similarity that is real. Operationally then, refined empathy would equal raw empathy minus the difference between projection and similarity.

Why did the subjects, who participated in the WHSG, project so much more than their control group associates? One guess is that they perceived that they were in the same state of mind, at the time of testing, that inner city people are in as a normal course of

²Ibid.

events. And what is more, the subjects were accurate in their projection. Although projection is normally thought of as non-adaptive behavior, the subjects recognized that the experience that they had just undergone had put them in a state of mind, although probably temporarily, like that of inner city people. Therefore, when filling out the inventories they filled them out for inner city people much in the same way as they filled them out for themselves and in this way registered a high amount of projection.

The testing of hypothesis 3 showed that treatment groups did not score significantly different on raw empathy from control groups. In measuring raw empathy a number of observations were made. An examination of the data cells showed that treatment groups would go from their own views beyond the mean of the norm group when predicting how inner city people might respond to the FAI. In some cases, treatment groups were expressing more strongly an attitudinal statement accepted by the norm group, but in doing so exhibiting less of an empathic response. For example, the mean norm group response to item number 7 on the FAI was 1.69. The mean response of one of the treatment groups to item number 7 was 1.22, indicating agreement in the same direction as the norm group. The control group in this case responded in agreement with the statement, but not quite as

strongly as either the norm group or the treatment group, registering a mean response of 1.78. The control group, therefore, had the greater accuracy, or raw empathy score.

Based on the testing of hypothesis 4 the mean refined empathy scores of treatment groups were not as high as those of the control groups. The refined empathy score was determined by subtracting the raw empathy score from the projection score. The raw empathy scores of treatment groups were only slightly, not significantly, higher than control groups. When the raw empathy scores of treatment and control groups were subtracted from the projection scores (recalling that, the lower the projection score the greater the projection) what slight differences the treatment groups had over control groups were lost because the treatment groups had projected so much.

The testing of hypothesis 5 showed that administering the FAI to an experimental group before as well as after participating in the WHSG does not sensitize the group to the point of expressing greater similarity or refined empathy scores than those experimental groups that are given no pre-test.

Recommendations

The findings of this dissertation are only a beginning in the area of finding and refining effective methods of affective inner city teacher education. This

thesis was limited to a beginning study of only one technique for developing attitudinal understanding on the part of prospective inner city teachers. Suggestions for further research include:

1. a replication of this study using the redefined concept of empathy as outlined in this chapter under "Discussion of Findings";
2. a measurement of the effect of the WHSG following the talk down, rather than before as was done in this study;
3. a study of the attitudinal changes in individuals affected by the WHSG, especially long-range attitudinal change;
4. a refinement of the concept of cross-cultural empathy in order to provide an experimental model for its development in prospective inner city teachers;
5. a comparison of the effectiveness of other simulations compared with the WHSG in developing cross-cultural understanding;
6. a comparison between the effectiveness of the WHSG with in-service teachers in the inner city and with undergraduate education majors;
7. a testing of the WHSG for its effectiveness as part of a series of activities of role playing and simulation specifically designed to prepare inner city teachers;

8. The development of methods and techniques to help inner city residents empathize with teachers, thus developing reciprocal empathy.

The findings of such studies as briefly outlined above would no doubt contribute substantially to the supply of methods available for the affective preparation of inner city teachers.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

- Abt, C. C. Serious Games. New York: The Viking Press, 1970.
- ✓ Boocock, S. S. and E. O. Schild, eds. Simulation Games in Learning. Beverly Hills: Sage Publications, Inc., 1968.
- Buros, O. K., ed. Fifth Mental Measurements Yearbook. Highland Park, N. J.: The Gryphon Press, 1959.
- _____, ed. Sixth Mental Measurements Yearbook. Highland Park, N. J.: The Gryphon Press, 1965.
- Coleman, J. S. Equality of Educational Opportunity. Washington: U. S. Department of Health, Education and Welfare, Office of Education, 1966.
- ✓ Coplin, W. D., ed. Simulation in the Study of Politics. Chicago: Markham Publishing Co., 1968.
- Coser, L. A. and B. Rosenberg, eds. Sociological Theory: A Book of Readings. First Edition. New York: The Macmillan Company, 1957.
- English, H. B. and A. C. English. A Comprehensive Dictionary of Psychological and Psychoanalytical Terms. New York: Longmans, Green and Co., 1958.
- Fenichel, O. The Psychoanalytic Theory of Neurosis. New York: W. W. Norton, 1945.
- Griffin, J. H. Black Like Me. Boston: Houghton Mifflin Company, 1961.
- ✓ Guetzkow, H., ed. Simulation in Social Science: Readings. Englewood Cliffs, N. J.: Prentice Hall, Inc., 1962.
- Halsell, G. Soul Sister. New York: World Publishing Co., 1969.

- Harriman, P. L. The New Dictionary of Psychology. New York: Philosophical Library, 1947.
- Harrington, M. The Other America. Baltimore: Penguin Books, 1963.
- Johnson, P. E. Personality and Religion. New York: Abingdon Press, 1957.
- Katz, R. L. Empathy. New York: Free Press of Glencoe, 1963.
- Learner, D., ed. The Human Meaning in the Social Sciences. New York: Meridian Books, Inc., 1959.
- McClelland, D., et al., eds. Talent and Society. Princeton, N. J.: Van Nostrand, Inc., 1958.
- Mead, G. H. Mind, Self and Society. Chicago: University of Chicago Press, 1934.
- Moreno, J. L. Psychodrama. Beacon, N. Y.: Beacon House, Inc., 1944.
- Murphy, G. An Introduction to Psychology. New York: Harper Bros., 1951.
- Pinckney, A. Black Americans. Englewood Cliffs, N. J.: Prentice Hall, Inc., 1969.
- ✓Raser, H. R. Simulation and Society: An Exploration of Scientific Gaming. Boston: Allyn and Bacon, Inc., 1969.
- Reik, T. The Inner Experience of a Psychoanalyst. London: George Allen and Unwin, Ltd., 1949.
- Smith, H. C. Sensitivity to People. New York: McGraw-Hill Book Company, 1966.
- Stein, E. On the Problem of Empathy. The Hague: Martinus Nijhoff, 1964.
- U. S. National Advisory Commission on Civil Disorders. Report of the U. S. National Advisory Commission on Civil Disorders. New York: Bantam Books, 1968.
- Warren, H. C. Dictionary of Psychology. Boston: Houghton Mifflin Company, 1934.
- Wolff, K. H. The Sociology of George Simmel. Glencoe, Ill.: The Free Press, 1950.

Articles

Allport, G. W. "Catharsis and the Reduction of Prejudice." The Journal of Social Issues, 1:3-10 (August, 1945).

Arnez, N. L. "A Unique Teacher Education Program." Improving College and University Teaching, 16:150-152 (Spring, 1968).

Bender, J. E. and A. H. Hastorf. "On Measuring Generalized Empathic Ability (Social Sensitivity)." Journal of Abnormal and Social Psychology, 48:503-506 (1953).

Buchheimer, A. "The Development of Ideas About Empathy." Journal of Counseling Psychology, 10:61-70 (1963).

Cantrell, M. H. "Empathy Related to Child Study." Journal of Home Economics, 58:142-144 (February, 1966).

Carroll, E. G. "Adjusting Our Teaching--Adapting to Other Values." Elementary English, 46:174-173 (February, 1969).

Chapman, R. "Teaching is Also Learning." The Bulletin of the National Association of Secondary School Principals, 52:23-27 (October, 1968).

Cottrell, L. S., Jr. "Some Neglected Problems in Social Psychology." American Sociological Review, 15:705-712 (December, 1950).

Cowden, R. C. "Empathy or Projection." Journal of Clinical Psychology, 11:188-190 (April, 1955).

Cratty, B. J. "The Assessment of Teacher Sensitivity." California Journal of Educational Research, 13:73-77 (March, 1962).

✓ Cruickshank, D. R. "Simulation: New Direction in Teacher Preparation." Phi Delta Kappan, 48:23-24 (September, 1966).

✓ ————. "The Use of Simulation in Teacher Education: A Developing Phenomenon." The Journal of Teacher Education, 20:23-26 (Spring, 1969).

DeKock, P. "Simulation and Changes in Racial Attitudes." Social Education, 33:181-183 (February, 1969).

Dixon, W. R. and W. C. Morse. "The Prediction of Teaching Performance: Empathic Potential." Journal of Teacher Education, 12:322-329 (September, 1961).

Dymond, R. F. "A Scale for the Measurement of Empathic Ability." Journal of Consulting Psychology, 13:127-133 (April, 1949).

_____. "Personality and Empathy." Journal of Consulting Psychology, 14:343-350 (1950).

Flynn, F. A. "Beginning at Hutchins Junior High." The Bulletin of the National Association of Secondary School Principals, 52:123-129 (October, 1968).

Foster, H. L. "The Inner City Teacher and Violence: Suggestions for Action Research." Phi Delta Kappan, 50:172-175 (November, 1968).

Gage, N. L. "Explorations in the Understanding of Others." Educational and Psychological Measurements, 13:14-26 (Spring, 1953).

_____. "Explorations in Teachers Perceptions of Pupils." The Journal of Teacher Education, 9:97-101 (March, 1958).

Gage, N. L. and L. J. Cronbach, "Problems in Interpersonal Perception." Psychological Review. 62:411-422 (November, 1955).

Gage, N. L. and G. Suci. "Social Perception and Teacher-Pupil Relationships." Journal of Educational Psychology, 42:144-152 (March, 1951).

Gibb, J. R. "Effects of Role Playing Upon (a) Role Flexibility and Upon (b) Ability to Conceptualize a New Role." The American Psychologist, 7:310 (July, 1952).

Gordon, K. "A Device for Demonstrating Empathy." Journal of Experimental Psychology, 17:892-893 (October, 1934).

Gronlund, N. E. "Social Perception and Teaching Effectiveness." The School Review, 63:277-283 (May, 1955).

Halpern, H. M. "Some Factors Involved in Empathy." Dissertation Abstracts, 14:1458-1459 (1954).

_____. "Empathy, Similarity and Self-Satisfaction." Journal of Consulting Psychology, 19:449-452 (December, 1955).

_____. "Predictive Empathy and the Study of Values." Journal of Consulting Psychology, 21:104 (1957).

- Hastorf, A. H. and I. E. Bender. "A Caution Respecting the Measurement of Empathic Ability." The Journal of Abnormal and Social Psychology, 47:574-576 (1952).
- Hawkes, G. R. and R. L. Egbert. "Personal Values and the Empathic Response: Their Inter-Relationships." The Journal of Educational Psychology, 45:469-476 (November, 1954).
- Herman, S. M. (OSF) "The Disadvantaged Teacher." Catholic School Journal, 67:25-26 (February, 1967).
- Herman, S. N. and E. Schild. "Ethnic Role Conflict in a Cross-Cultural Situation." Human Relations, 13: 215-228 (August, 1960).
- Howard, D. P. "The Needs and Problems of Socially Disadvantaged Children as Perceived by Student and Teachers." Exceptional Children, 34:327-335 (January, 1968).
- Inman, T. H. "Educating Teachers for the Disadvantaged." Editorial. The Journal of Business Education, 43:268-269 (April, 1968).
- Jacobs, E. B. "Attitude Change in Teacher Education." The Journal of Teacher Education, 19:410-415 (Winter, 1968).
- Janis, I. L. and B. T. King. "The Influence of Role Playing on Opinion Change." Journal of Abnormal and Social Psychology, 49:211-218 (1954).
- ✓ Johnson, H. A. "Multimedia and Innovative Techniques for Educating Teachers of the Disadvantaged." The Journal of Teacher Education, 19:85-90 (Spring, 1968).
- King, B. T. and I. L. Janis. "Comparison of the Effectiveness of Improvised Versus Non-Improvised Role Playing in Producing Opinion Changes." Human Relations, 9:177-186 (1956).
- Lowry, W. C. "Some Innovations in the Preparations of Teachers." Education Digest, 34:28-31 (February, 1969).
- Lundstedt, S. "Criteria for Effective Teaching." Improving College and University Teaching, 14:27-31 (Winter, 1966).

- McClelland, W. A. "A Preliminary Test of Role-Playing Ability." Journal of Consulting Psychology, 15:102-108 (April, 1951).
- Meek, C. R. "An Experiment in Teaching Empathy." The Journal of Educational Sociology, 31:107-110 (October, 1957).
- Melby, E. O. "The Contagion of Liberal Education." The Journal of Teacher Education, 18:134-137 (Summer, 1967).
- Metcalf, J. T. "Empathy and the Actor's Emotion." The Journal of Social Psychology, 2:235-238 (May, 1931).
- Moreno, J. L. "Some Comments to the Trichotomy, Tele-Transference-Empathy." Group Psychotherapy, 5:87-90 (1952).
- Norman, R. D. and P. Ainsworth. "The Relationships Among Projection, Empathy, Reality and Adjustment, Operationally Defined." Journal of Consulting Psychology, 18:53-58 (1954).
- Norman, R. D. and W. C. Leiding. "The Relationship Between Measures of Individual and Mass Empathy." Journal of Consulting Psychology, 20:79-82 (February, 1956).
- Olden, C. "On Adult Empathy with Children." Psychoanalytic Study of the Child, 8:111-126 (1954).
- Olsen, E. G. "Teacher Education for the Deprived: A New Pattern." School and Society, 95:232-234 (April 1, 1967).
- Ornstein, A. C. "Reaching the Disadvantaged." School and Society. 96:214-216 (March 30, 1968).
- _____. "Improving Teachers for Slum Schools." Improving College and University Teaching, 16:120-123 (Spring, 1968).
- _____. "Anxieties and Forces which Mitigate Against Ghetto School Teachers." Journal of Secondary Education, 43:243-254 (October, 1968).
- Parker, C. A. "Empathy." Personnel and Guidance Journal. 34:89-93 (October, 1955).
- Passow, A. H. "Diminishing Teacher Prejudice." New York State Education, 55:6-10 (February, 1968).

- Redfield, R. "The Study of Culture in General Education." Social Education, 11:259-264 (1947).
- Remmers, H. H. "A Qualitative Index of Social-Psychological Empathy." American Journal of Orthopsychiatry. 20:161-165 (January, 1950).
- Speroff, B. J. "Empathy and Role Reversal as Factors in Industrial Harmony." The Journal of Social Psychology. 37:117-120 (February, 1953).
- Stewart, D. A. "The Psychogenesis of Empathy." The Psychoanalytic Review, 41:216-228 (July, 1954).
- Strunk, O. "Empathy: A Review of Theory and Research." Psychological Newsletter, 9:47-57 (1957).
- ✓ Tansen, P. J. and D. Unwin. "Simulation Gaming: Bridge Between Theory and Practice." The Times Educational Supplement, 2770:2077, June 21, 1968.
- Travers, R. M. W. "A Study of the Ability to Judge Group Knowledge." American Journal of Psychology, 56:54-65 (January, 1943).
- ✓ Twelker, P. A. "Classroom Simulation and Teacher Preparation." School Review, 75:197-204 (Summer, 1967).
- Van Zelst, R. H. "Validation Evidence of the Empathy Test." Educational and Psychological Measurement, 13:474-477 (Autumn, 1953).
- Wallen, R. "Individuals' Estimates of Group Opinion." Journal of Social Psychology, 17:269-274 (1943).
- Will, R. Y. "The Education of the Teacher as a Person." The Journal of Teacher Education, 18:471-475 (Winter, 1967).
- Wisniewski, R. "Urban Teacher Preparation Programs." Social Education, 33:77-82 (January, 1969).
- Wolf, R. and H. A. Murray. "An Experiment in Judging Personalities." Journal of Psychology, 3:345-365 (1937).
- Wozniak, J. M. "Some Trends in Teacher Education." National Catholic Education Association Bulletin, 63:262-266 (August, 1966).

Yearbooks

American Association of Colleges for Teacher Education.
Changing Dimensions in Teacher Education. Twentieth Yearbook. Washington, D. C., 1967.

_____. Teacher Education/ Issues and Innovations.
Twenty-first Yearbook. Washington, D. C., 1968.

Association for Student Teaching. Mental Health and Teacher Education. Dubuque, Iowa: Wm. C. Brown, Co., Inc., 1967.

Dissertation and Monographs

Anikeeff, A. M. Reciprocal Empathy: Mutual Understanding Among Conflict Groups. Lafayette, Indiana: Purdue University Division of Educational Reference, 1951.

Campbell, R. J. "The Development and Validation of a Multiple Choice Scale to Measure Affective Sensitivity (Empathy)." Unpublished Ph.D. Dissertation, Michigan State University, 1967.

Chapman, J. L. "The Development and Validation of a Scale to Measure Empathy." Unpublished Ph.D. Dissertation, Michigan State University, 1966.

✓Cunningham, L. L. "Simulation and the Preparation of Educational Administrators." Paper read at the University Council on Educational Administration Conference, October, 1966, Ann Arbor, Michigan.

Diskin, P. "A Study of Predictive Empathy and the Ability of Student Teachers to Maintain Harmonious Interpersonal Relations in Selected Elementary Classrooms." Unpublished Ph.D. Dissertation, University of Michigan, 1956.

Erb, D. L. "Racial Attitudes and Empathy: A Guttman Facet Theory Examination of Their Relationships and Determinants." Unpublished Ph.D. Dissertation, Michigan State University, 1969.

Fogg, W. E. "The Development of Teacher Sensitivity to Pupil Sensitivity." Unpublished Ph.D. Dissertation, University of Southern California, 1956.

✓Gaffga, M. R. "Simulation: A Method for Observing Student Teacher Behavior." Unpublished Ed.D. Dissertation, University of Tennessee, 1967.

✓Garvey, D. M. Simulation, Role Playing, and Sociodrama in the Social Studies. The Emporia State Research Studies, No. 16, December, 1967.

Goodman, H. "Self-Insight, Empathy and Perceptual Distortion: A Study of the Relationships Between Measures of Self-Insight, Empathy and Perceptual Distortion as Defined by Ratings Made by Individuals." Unpublished Ph.D. Dissertation, New York University, 1952.

✓Gustafson, K. L. "Simulation of Anxiety Situations and its Resultant Effect on Anxiety and Classroom Interaction of Student Teachers." Unpublished Ph.D. Dissertation, Michigan State University, 1969.

Halchin, L.F.C. "Identifying Factors in Early Home and Family Life Which May Contribute to the Empathic Development of Teachers." Unpublished Ph.D. Dissertation, Pennsylvania State University, 1965.

Henry, P. M. "The Relationship Between Empathic Behavior and Personality Variables Among Teachers." Unpublished Ed.D. Dissertation, University of Buffalo, 1961.

✓Lindquist, G. W. "Utilization of Simulation and Group Counseling in the Training of Prospective Elementary School Teachers." Unpublished Ph.D. Dissertation, Arizona State University, 1969.

✓Miller, G. M. "An Attempt to Determine Certain Effects of Laboratory Classroom Simulation Training on Selected Dimensions of Teacher Behavior." Unpublished Ph.D. Dissertation, University of Oregon, 1967.

Mills, S. A. "A Study of the Effects of Teacher Empathy and of Situational Structure on Pupils' Performance." Unpublished Ed.D. Dissertation, University of Alabama, 1965.

Moreno, J. L. Sociodrama. Psychodrama Monograph #1. New York: Beacon House, 1944.

_____. Psychodrama and the Psychopathology of Interpersonal Relations. Psychodrama Monograph #16. Beacon, New York: Beacon House, 1945.

Motto, J. "An Investigation of Some Personality Correlates of Empathy in College Teachers." Unpublished Ph.D. Dissertation, University of Michigan, 1956.

- Myers, C. L. H. "An Experiment in the Development and Measurement of Empathy in Social Work Students." Unpublished Ph.D. Dissertation, Washington University, 1966.
- ✓Ogunniyi, O. "The Methodology of Education Simulation and Design of a Simulated Instructional Model for Occupational Education." Unpublished Ph.D. Dissertation, Michigan State University, 1969.
- Roell, C. L. "A Study of Empathic Relationships Between Pupils and Student Teachers in Physical Education." Unpublished Ph.D. Dissertation, University of Michigan, 1957.
- ✓Ross, J. L. "An Experimental Use of Simulation as a Training Technique for Collective Negotiations for Teachers." Unpublished Ph.D. Dissertation, University of California at Los Angeles, 1968.
- Underhill, R. G. "The Relationship of Elementary Student Teacher Empathy (Affective Sensitivity) Change to Supervising Teacher Empathy and Student Teaching Success." Unpublished Ed.D. Dissertation, 1968.
- Waldman, H. "Correlates of Empathy in Family Life Teachers." Unpublished Ed.D. Dissertation, Columbia University, 1961.
- White, R. "Effects of Teacher Empathy, Non-Possessive Warmth and Genuineness on Achievement of Mentally Retarded Students." Unpublished Ph.D. Dissertation, George Peabody College for Teachers, 1968.

APPENDICES

APPENDIX A

THE WASHINGTON HEIGHTS SIMULATION GAME

THE WASHINGTON HEIGHTS SIMULATION GAME

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The objective of the game is to communicate the struggle, in the midst of powerlessness, that people of the inner city are going through in their move for community control. In developing the game, some things were kept in mind. First, what was being communicated is a fundamental problem in the inner cities of America. Second, that this problem is one of powerlessness, resulting in alienation, of the residents of black ghettos and barrios. Socio-drama, coupled with some role-playing, and the flavor of a simulation game combined to give the result that the members of the group playing the game would hopefully develop an empathic feeling for Black people in the inner city, who are struggling for self-determination.

The game has been played by up to 75 players, but it is probably best played with 16-36. With 24 players, four people are needed to run the game. One of the four people running the game (call him Leader #1) takes the group for a briefing session before the start of the game. During the briefing session Leader #1 tells the participants that the object of the game is simply,-

" If you like the situation that you find yourself in, do everything you can to enhance and maintain it. If, on the other hand, you find yourself in undesirable circumstances, do everything you can to change your situation. Generally, the rules of this game are the rules of the game of life. "

The participants are further told that they should try to forget their actual identities and backgrounds, and that they will be given cultural, economic and sociological data about their identities for the game. Leader #1 then asks for questions and avoids doing any more than saying what he has already said in different words. After about five minutes of 'non-answers' the participants are told that there are a few more rules.

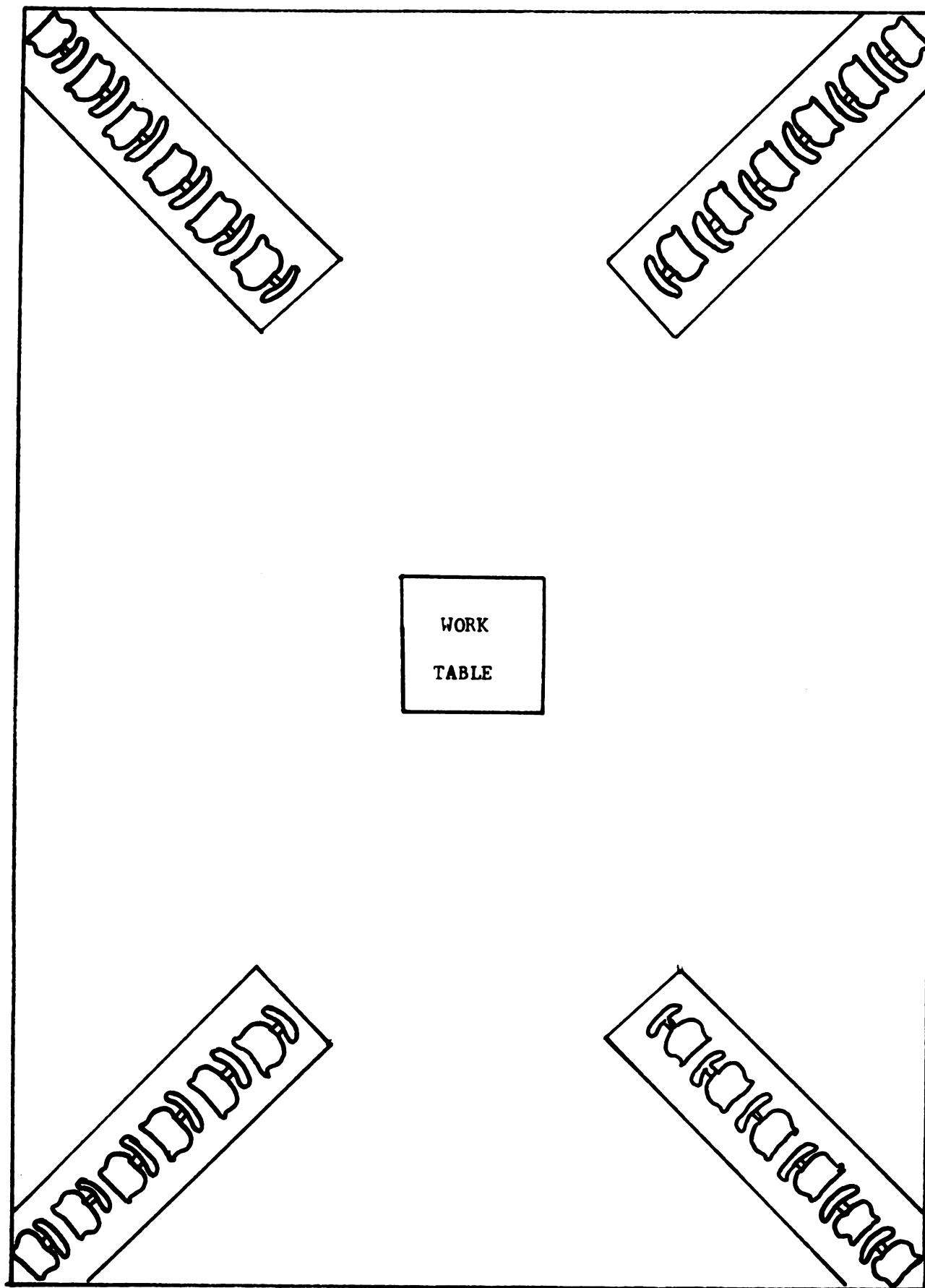
" There will be no smoking; Secondly, players are not allowed to wear watches or timepieces during the game;(This is done for a couple of reasons- to deprive them of a little personal liberty and also, to somewhat disorient them in terms of time) Thirdly, the person assigned to your group is your only source of information or resources of any kind. "

While the briefing session is going on, the other three leaders should be setting up the room. The set-up is crucial to the success of the game. (See Diagram of ROOM SET-UP) For 24 players, chairs are set up six in a straight row facing into each of the four corners of the room. This is done to impede inter- and intra-group communication. Around each of the rows of chairs masking tape is put down on the floor. The players are told that this represents the boundary for their residential area. If there is a clock in the room, it should be covered. In the middle of the room a work table is placed for the leaders, on which are placed the materials for the game. This table also serves as a meeting place for the leaders. A record player is also set up on which at loud, but not unbearable volume, a modern jazz record is played. The remaining chairs in the room are overturned and piled on top of each other, establishing separations between residential groups. Each area is strewn with wadded newspapers and available litter.

Meanwhile, back in the briefing session, the watches have been collected, and people have ceased smoking. (It's quite alright if the leaders are smoking; in fact, if they have the filthy habit, it's encouraged!) At this point the players are told that there is a time limit- they are not told what this time limit is, because in fact there is not a hour and minute prescribed time involved - and that they should play with that in mind. Each leader is assigned to a group. The players are told that the game is sectioned into reaction periods and information periods. The playing of music and the dimming of lights indicates that a reaction period is going on and that they should play with the game objective in mind. When the music stops and the lights are up it is an information period. Finally, the group is told to stay in the room until the game is over.

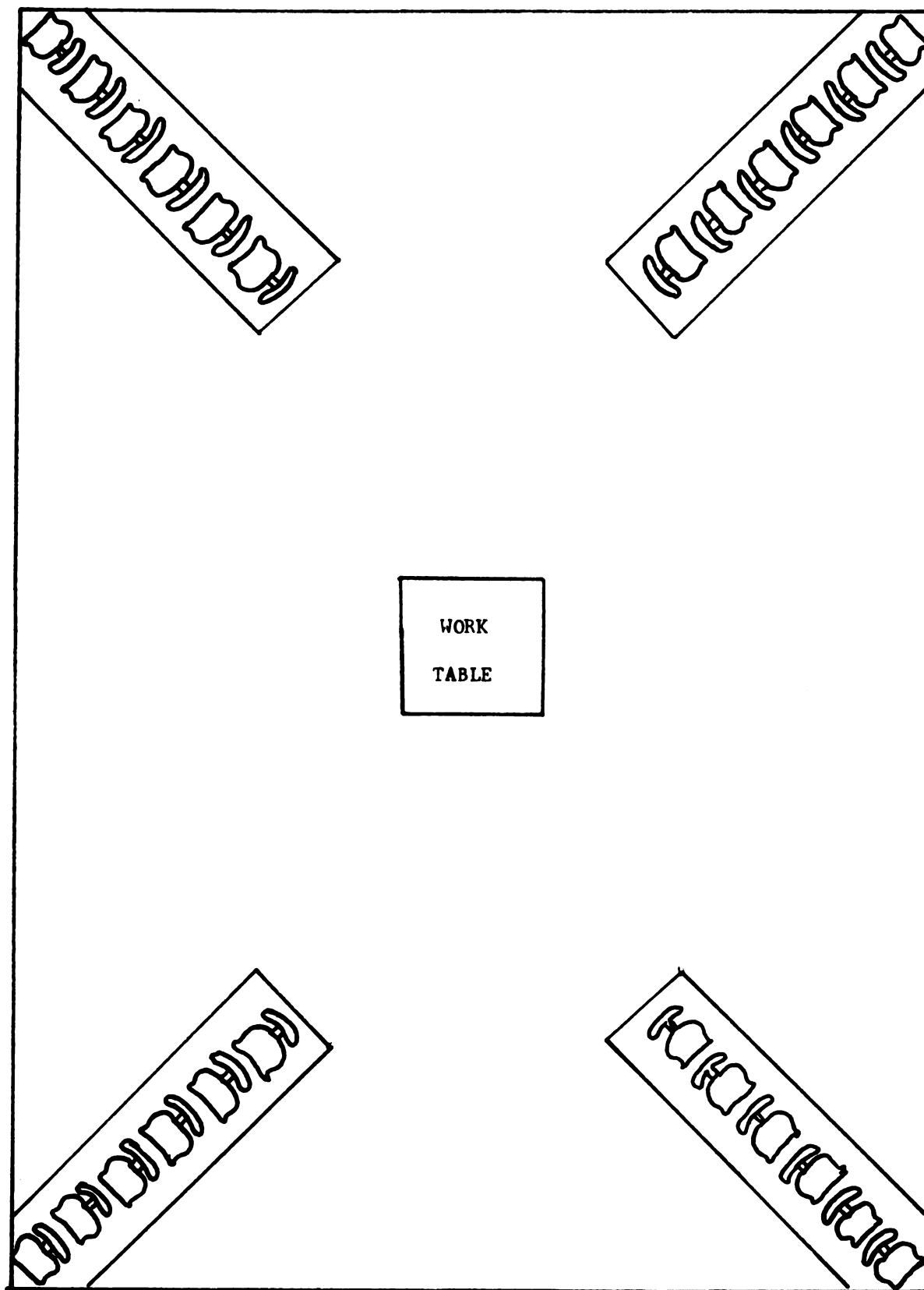
ROOM SET-UP * (for 24 players)

* Diagram does not show overturned chairs or strewn wastepaper.



ROOM SET-UP * (for 24 players)

* Diagram does not show overturned chairs or strewn wastepaper.



The room is dimly lit and the record is turned on and one group at a time the players are led into the room and seated in their residential area by their group leader. When everyone in the group is seated, the leaders meet at the table which they have set up in the middle of the room. They talk quietly with one another, making sure that the members of their residential group do not talk with each other or turn around or move their chairs. If there is any of this 'deviant behavior' the group leader quietly asks the 'deviant' if there is any problem or if there is anything that the leader can do. After a few minutes of quiet squirming, each leader goes to his group, the music is stopped, the lights turned up and Information Period #1 begins with the group leader passing out the following message to each player:

" GREETINGS:

You are a member of a minority group known as Xenoos.
 The community you are living in is Washington Heights, a predominantly Xeno area of the inner city. Most of the housing is sub-standard. Those people who are employed, are involved in menial labor. The schools in the community are outdated and are not serving the needs of the students. The school board is appointed and elected city-wide and has one Xeno member out of 15, and he lives in a suburban area.
 The people who are in charge, including your group contact person, are majority. Majority is the term used to describe the ethnic cluster which makes up the majority of the country's population.
 Try to think of yourself not as the only Xeno in Washington Heights, but rather as if you were acting in behalf of a large number of people living in your neighborhood. What you do affects the lives of other Xenoos!
 This completes the first information period. "

The group leaders reconvene at the work table and a reaction period begins,- lights dim; record player up. After a couple of minutes, or less if the residents become anxious, each leader goes to his group and tells them that he understands their plight, that he is there to take care of them and they should sit tight because in a moment he will have some more information for them. Any type of suggestion on the part of a player should be parried with the idea that they should wait for some more information,- " Get all the facts first .",-before doing anything.

Then with the lights up and the music down another information period begins.

Information Period #2 "Community Facts"

One at a time the following facts are handed to each player on a slip of paper:

- Community Fact: Apartment houses, stores, businesses, bars, concessions and theaters are for the most part owned by persons who live outside your community and they take their profits home, of course. "

"Community Fact: Maternal mortality rates at birth are four times higher for non-Majority people. "

" Community Fact: The infant mortality rate in your community is three times that of most suburban areas. "

" Community Fact: Most of the 14,000 rat-bite cases in 1969 came from neighborhoods like yours. "

" Community Fact: The crime rate in your community is double the national average; crimes against persons in your district are thirty-five times that of high income Majority districts. "

" Community Fact: In your community the juvenile delinquency rate is two and one-half that of New York City as a whole; 16% of the people have venereal disease; almost 50% of the children are on Aid to Dependent Children; and 25% of the adults are on public assistance. "

As the members of each group react to situations by making requests or demands, the group leader should appear to be very open and concerned. Leaders should squelch any move for change, by glossing over the matter. The importance of a request should be played down. In some instances, the leader should even refuse to bring the request before the group of leaders for consideration. The leader should ask the group or the person requesting something whether the request reflects a personal need or a community need. Constantly, the leader should keep his group aware that he is going to take good care of 'his people' and that he wants them to get ahead in the game. The leader should be calming, and tell his group that they don't have anything to worry about.

From this point on into succeeding reaction periods the game leaders need to be very alert and do quite a bit of ad-libbing, because the players will most likely begin to ask questions and make demands. A leader can always bring the concern of his group before the other leaders around the work table for their advice in handling the problem.

Information Period #3 "Survey News"

- " News Item: Survey shows: Average Xeno college graduate makes a little less than the average Majority high school graduate. "
- " News Item: Survey shows that poor Xenoës have lower incomes than poor Majorities. "
- " News Item: The gap between Xeno and Majority family income has increased over the past five years. "
- " News Item: Of the 900 counties that are covered by the 1964 Civil Rights voting law, less than 100 to date have abided by the law. "
- " News Item: The unemployment rate for Xenoës has remained double that of Majorities since 1947. "

Reaction Period

Information Period #4 "Disturbing News"

- " News Item: Moon Flights costing \$15 Billion
\$3 Billion Poverty Program Aiding Xenoës Cut "
- " News Flash: Vice-President sees clear and present danger in Xeno militancy. Says there is no reason not to enforce the McCarran Act and use detention camps. "
- " News Item: Food stamp program cut in southern states. 3.5 million Xenoës affected. Federal officials today cut back the food stamp program in ten southern states. The spokesman for the Senate investigating committee said that the program, which was controlled by local elected officials, who are all Majority, was grossly mis-managed. In at least two instances local officials absconded with large quantities of stamps and federal funds. A prominent member of the Xeno movement said that in his opinion this was another atrocity in a systematic attempt at Xeno genocide by the Majority. "
- " News Item: Decentralization of schools defeated in state legislature. "
- " News Item: Senator Westland paid \$157,000 yearly not to grow cotton. Unfortunately, his unemployed Xeno plantation workers are given only \$35 weekly in unemployment compensation. "

Reaction Period

Information Period # 5 "Radical News"

- " News Item: Youths riot in Newark as temperature soars to 107.
Xeno spokesman blames unemployment. "
- " News Flash: Radical Xeno group raided by police on suspicion of maintaining an arsenal. Four Xenoës dead. No guns found. "

- " News Item: National Xeno Convention hears call to Xeno Power; Liberal Majority members bow out calling remarks inflammatory and racist. "
- " News Item: Organizer sentenced to thirty years.
Lee Otis Johnson, young Xeno organizer at Texas Southern University, was sentenced to thirty years in jail for possession of marihuana. The possession allegedly took place six months prior to the indictment. This was Johnson's first offense. Johnson was active in the Xeno movement and spoke with increasing frequency at meetings over the past two months. "
- " News Item: Xenoes move for community community control of schools in Chicago. "
- " News Item: Xenoes seize municipal buildings in Los Angeles. "
- " News Item: Xenoes declare war on state of California; Electrical power failure linked to Xeno move.
Ron Caluga, leader of the Organized Xenoes for Equality, presented Governor D.Valley with the formal declaration of war via telegram today.
Now in it's twelfth day the power blackout has crippled the entire West coast. A spokesman for the Pacific Power Company stated that the failure is due to a break in a major cable line in the Etsel Forest. This location has been determined since all other cables have been inspected. Presently, a small group of armed Xeno revolutionaries have surrounded the spot where the suspected cable break is and are preventing power company workmen from getting to the break. "
- " News Item: Xeno radicals 'nationalize' local industries. A small group of Xeno radicals seized several grocery, liquor and clothing stores and three small factories in the predominantly Xeno section of Atlanta early yesterday morning. The radicals are reportedly heavily armed, and will talk to or permit entry only to Xenoes. Mayor Sellers, who is Majority, has threatened to call in the National Guard. "

Reaction Period

Information Period #6 "Personal Setbacks"

- "Personal Message: We are sorry to inform you that your request for public assistance has been denied. "
- " Personal Message: We are sorry to inform you that because of over-production and reduced sales, the section in which you work must be temporarily shut down. We sincerely hope that you can make other arrangements for gainful employment. "
- " Personal Message: This is to inform you that your child has been suspended from school for inciting to riot. That is, he was among a group of speakers at a noon rally, which broke into fistfights and property destruction of the school. He will not be readmitted until you accompany him to the principal's office and show cause why he should be allowed to return to school. "

Reaction Period

Information Period # 7 "Grievance Responses"

As group members become upset with their conditions, they begin to make requests and demands. These demands are countered with personal messages from the central group of leaders. They go in this sequence:

" Personal Message: Your request for action on the issue you mentioned has been considered. You will be pleased to know that the matter has been referred to the proper committee and we will inform you of any decision. "

" Personal Message: The committee has made recommendation on the matter you inquired about. The administration is considering the recommendations for feasibility. We will let you know of the outcome in due time. "

" Personal Message: The administration has taken the recommendations of the committee under careful consideration. The administration finds the recommendations impossible to implement at this time. This does not mean that the matter is dropped. We will continue investigation. Thank you for your concern. "

" Personal Message: We fully understand and empathize with your situation. We are doing everything in our power to arrange a meeting to 'clear the air.' Meanwhile we will attempt to rectify the situation. Please be patient. "

" Personal Message: There will be a meeting to hear the grievances. The meeting will convene in three minutes. A representative from the main office will be present. Please be prepared to present your case. Please be prompt. "

After the meeting, an attempt to committeeize the matter is again made. If the Xenoes don't go along with this, and try anything like a demonstration, they are given the following:

" Personal Message: The event which you request is in violation of ordinance 983.12. We urge you not to proceed with this event or we will be forced to arrest you and anyone with you. At this point you will be deprived of your rights under the 'rules of the game.' "

If they persist and do anything disruptive they are given this:

" Personal Message: We regret to inform you that you are hereby placed under game arrest. From this point on you will remain in your seat and not participate in any way in this game. "

To keep groups in line it may be necessary to provide some sanctions for deviant behavior and some positive reinforcement for conforming behavior.

The next set of handouts are designed with these purposes in mind. They are called "Give and Take"

Give-

" News Item: One-hundred Xenoos accepted into job training program in Washington Heights. "

" News Item: Xeno appointed to administrative advisory committee. Liberals acclaim the move as a major breakthrough. Militant Xenoos call it tokenism. "

Take-

" Personal Message: We regret to inform you that the schools in your district will be closed indefinitely. Please do not send your children to school. "

" News Flash: Drugs Kill Youth
74th Xeno here in 1970
17 year old Washington Heights Boy added to roll that includes 143 adults. "

" Personal Message: We are sorry to inform you that your building has been chosen for an urban renewal site. It will be necessary for you to vacate immediately. "

" News Item: Three Xeno girls killed in church bombing.
Federal Marshall suspects Klan. "

Other sanctions and reinforcements can and should be ad-libbed by the group leaders. For instance, a group leader might improve sanitation services or open a health clinic. But these changes should come about slowly and be used to stave off (or provoke) the rebellion.

In all fairness, it should be pointed out that by this point, most groups are no longer paying any attention to their group leader and in some cases, are tearing up the slips of paper before reading them.

Usually within a half-hour or forty-five minutes the groups break down and are milling around. The groups find out eventually that they are all Xenoos and they will probably try to 'elect' leaders to bring things to order and give direction to the players of the game. At this point, those of us running the game take on the roles of agitators and move in and out of the large group, pointing out that the conditions in their communities have not changed and will

not change until the residents return to their communities and take their seats. The leaders also point to the elected leaders and call them 'demagogues', 'power-hungry militants' and 'self-seeking dictators'.

The players usually go for their watches, which have been left in a box in plain view, and light up cigarettes. These actions of 'self-indulgence' make for good points to question their sincerity in improving the conditions of Xenoos. The players will also probably want to turn the record off.

When the point has been made, - things are relatively chaotic, the players are experiencing anxiety from their powerlessness, an impasse has been reached - time should be called.

Then comes what is probably the most important part of the learning experience, the 'talk down'. During this session, everyone gets some coffee and puts the chairs in a circle and the players are encouraged to talk about their experiences, cognitive and affective awarenesses derived from playing the game. In the past people have expressed hostility, self-directed and especially towards those who were running the game. (During one running of the game a woman in her early thirties punched one of the leaders during the agitation phase. On other occasions the leaders have been bodily put out of the room, while the players talk things over.)

This section of the game has lasted as long as two hours, following a structured session of less than an hour. People should be urged to talk about how they relate this game to real life experiences of other people. Avoid having the players comment on the game as an educational device or its technical aspects until everything else that needs to be said is said. (It might be helpful to point out that all the information used in the game is based on fact, taken from newspapers and resources such as the Kerner Commission Report.)

Still the 'talk down' should concentrate on the inner states of the players.

Caution: At times things will not go as they have been outlined here.

Therefore it is necessary for those running the game to be able to create responses and conditions for the players. But this cannot be done capriciously. It must be done out of a consistent and well thought out sensitivity to the movement of Black and Brown people for liberation in the inner cities of America.

APPENDIX B

ATTITUDE INVENTORY (PRELIMINARY)

ATTITUDE INVENTORY (PRELIMINARY)

Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

1. Inner city residents should be able to use the same kind of health facilities as suburban people.
2. America is a racist society.
3. The native intelligence of Blacks and Chicanos (Mexican-Americans) is lower than whites.
4. The community services in the inner city are as good as in the suburbs.
5. Housing is available anywhere for the inner city resident who wants to move.
6. Law and order as defined by white America is irrelevant to Black people.
7. We should all work for the cause of the inner city people, for it is a human cause.
8. The economy of the U.S. thrives partly on the exploitation of Blacks.
9. Jobs are easy to get for inner city residents.
10. The culture of Africa is primitive.

[illegible]

[illegible]

34. Inner city students should be made to speak "proper English" in school at all times.
35. Children of minority groups are naturally aggressive.
36. Black and Chicano children are slow learners.
37. The problems of inner city residents are caused by their environment.
38. Playing by the rules is the only way to make it in society.
39. The police are helpful and beneficial.
40. Inner city residents should have political control of their communities.
41. Special provision should be made for participation of minorities in government.
42. The governments of large cities need to be decentralized for local control.
43. The laws are not serving Black people in America.
44. We have ghettos because it is not in the interest of the white power structure to liberate them.
45. Black culture is separate and distinct from white culture.

Strongly Disagree					
Disagree					
Slightly Disagree					
Slightly Agree					
Agree					
Strongly Agree					

46. Inner city residents should have community control of their schools.
47. Inner city children need a highly structured classroom.
48. The teachers of inner city schools should live in the community where they teach.
49. Inner city schools should have the same curriculum as suburban schools.
50. If you try to be free, the system will crush you.

APPENDIX C

FLYNN ATTITUDE INVENTORY

FLYNN ATTITUDE INVENTORY

Agree or disagree with the following statements by placing an "X" in one of the boxes for each statement.	Strongly Agree	Agree	Slightly Agree	Disagree	Disagree Slightly	Strongly Disagree
1. White America is the mother country, Black America is the colony.						
2. Black and Chicano (Mexican-American) children are slow learners.						
3. Special provision should be made for participation of minorities in government.						
4. The laws are not serving Black people in America.						
5. Jobs are easy to get for inner city residents.						
6. America is a racist society.						
7. Inner city residents should have political control of their communities.						
8. Black militants are treated fairly by the police.						
9. If you try to be free, the system will crush you.						
10. The native intelligence of Blacks and Chicanos is lower than whites.						

Means and Standard Deviations of
Responses of Norm Group to FAI

<u>Item</u>	<u>Mean</u>	<u>S.D.</u>
1	2.21	1.50
2	5.56	.79
3	1.68	1.08
4	1.77	1.02
5	5.24	1.28
6	1.21	.41
7	1.69	1.14
8	5.53	1.30
9	1.71	1.24
10	5.59	.89
11	1.68	1.17
12	1.62	1.05
13	2.06	1.35
14	5.21	1.36
15	5.50	1.21
16	1.71	1.17
17	5.06	1.40
18	4.75	1.61
19	1.27	.62
20	1.35	.77

APPENDIX D

INSTRUCTIONS FOR USING "FLYNN
ATTITUDE INVENTORY"

INSTRUCTIONS FOR USING "FLYNN
ATTITUDE INVENTORY"

Tell the Subjects:

"The information gathered from this inventory will be used for research purposes only. It will in no way influence your grade or evaluation in any course."

Pass out the Inventories Marked "S" for "Self" and Tell the Subjects:

"Please respond to this attitude inventory in keeping with your personal beliefs. Mark an "X" for each item and place the "X" totally within the box which you choose."

When the Subjects have Completed the Inventory, Collect the "S" Inventories. Next Pass Out the Inventories Marked "I" for "Inner City" and Tell the Subjects:

"This time respond to the attitude inventory as you think a resident of the inner city would respond to it. Again, mark an "X" for each item and place the "X" completely within the box which you choose."

Raw Scores and Differences of Item by Item Deviations On
All Items of the FAI for Treatment and Control Groups

Time	Similarity		Projection		Raw Empathy		Refined Empathy	
	Score	Dif	Score	Dif	Score	Dif	Score	Dif
1	T	12.11	10.63		7.08		3.37	
	C	13.74	15.27	-4.64	7.14	.06	6.63	-3.26
2	T	9.55	8.20		7.21		.99	
	C	21.59	13.26	-5.06	8.61	1.40	4.65	-3.66
3	T	21.64	20.30		5.69		14.37	
	C	27.04	26.45	-6.15	6.93	1.24	19.77	-5.60
4	T	18.96	17.14		6.38		10.45	
	C	25.01	23.69	-6.55	6.40	.02	17.39	-6.94
5	T	11.28	13.40		6.50		7.43	
	C	17.94	18.04	-4.64	6.59	.09	11.45	-4.02
6	T	7.73	9.00		6.61		2.26	
	C	17.94	18.04	-9.04	6.59	-.02	11.45	-9.19
7	T	12.93	12.81		6.99		5.40	
	C	20.25	18.10	-6.71	7.31	.32	10.88	-5.48
8	T	11.04	14.13		5.11		9.11	
	C	13.74	15.27	-1.14	7.14	2.03	6.63	2.48
9	T	7.86	12.23		7.71		4.52	
	C	13.74	15.27	-3.04	7.14	-.57	6.63	-2.11

Raw Scores and Differences of Item by Item Deviations On
Selected Items of the FAI for Treatment and Control Groups

Time		Similarity		Projection		Raw Empathy		Refined Empathy	
		Score	Dif	Score	Dif	Score	Dif	Score	Dif
1	T	5.29		4.55		3.10		1.25	
	C	6.24	.95	7.87	-3.32	3.63	.53	2.40	-1.15
2	T	4.10		4.31		2.83		1.48	
	C	10.38	6.28	6.08	-1.77	4.46	1.63	1.62	- .14
3	T	9.52		9.95		2.42		7.53	
	C	13.59	4.07	12.93	-2.98	3.56	1.14	10.37	-2.84
4	T	8.26		7.79		2.55		5.24	
	C	12.21	3.95	11.60	-3.81	2.71	.16	8.99	-3.75
5	T	4.69		6.72		3.61		3.09	
	C	9.18	4.49	9.14	-2.42	3.26	- .35	5.88	-2.79
6	T	3.88		4.18		3.28		.80	
	C	9.18	5.30	9.14	-4.96	3.26	- .02	5.88	-5.08
7	T	5.79		6.97		2.90		4.07	
	C	8.64	2.85	9.69	-2.72	3.11	.21	6.61	-2.54
8	T	4.51		7.40		2.53		4.97	
	C	6.24	1.73	7.87	- .47	3.63	1.10	2.40	2.57
9	T	2.70		5.75		4.33		1.42	
	C	6.24	3.54	7.87	-2.12	3.63	- .70	2.40	- .98

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