DRIFTS IN LOCUS OF CONTROL AS A FUNCTION OF CROSS - CULTURAL EXPERIENCES

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ABSTRACT

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By

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A number of researchers have studied the Internal-External Locus of Control construct. Many of these researchers have studied how the construct relates to Blacks and lower class individuals, only to report these groups to be more external than Whites or middle class individuals. For the most part, these researchers have not been attuned to the experiential differences in power and expectancy for Black and White populations. Invariably the internal perspective, with the exception of the extreme internal viewpoint, arises as the most intelligent, competent and desirable locus of control. Inasmuch as externality has a high frequency of occurence in minority populations, these negative implications of externality may be inappropriately transferred to minority populations. This externality is a socially learned construct and not an inherent racial distinction. One's past experiences are of considerable importance in formulating a locus of control.

The present study is based on the contention that there is a direct relationship between locus of control and past

experiences. Therefore, altering experiences should also alter locus of control, in experiences where Blacks as a group have some expectancy for success they operate in an internal, achievement oriented manner. The purpose of this study was to set in perspective the internal-external locus of control construct as it relates to Blacks as a group. It is not enough to simply dispel the stigma of Blacks as inferior by reason of externality but also to offer, study and explain alternate interpretations and motivations for externality.

The experiences of subjects were experimentally altered through the use of a simulation game (SIMSOC). By modifying the prescribed SIMSOC procedure slightly, it was possible to elicit the desired effects ethically, economically and safely. One modification of SIMSOC was the delegation of power positions by race rather than by chance. Two separate games were administered, one with Blacks having the power positions and the other with Whites having the power positions. In each game there was a minority of the subordinate population who were delegated to power positions. In addition the three regions in which players "lived" were a function of their power positions. The first region was completely composed of the dominant race who held most of the power. The second region was racially integrated and was moderately powerful. The third region was totally composed of the subordinate race and was void of any power. The Black dominated game represented the reversal situation while the White dominated game

represented the status quo. The effects of the experimental game treatment were measured by pre- and post-test scores on the Rotter I-E Scale, in addition to situational, observational, behavioral rates.

The results indicate that Blacks in power positions in the Black dominated game scored significantly more internal on the I-E post-test (p .025). Blacks not having power positions in the Black game apparently identified with Blacks in power to a small degree as there was a trend toward internality (p .09). Whites not in power in the Black game did not move toward externality as a function of their subordinate game experience. Though there was no significant movement in this group, the slight movement that did occur was in the internal direction. As predicted there was no significant movement in the White (status quo) dominated game. Though no change was predicted for the White dominated game it is difficult to assert the cause of the null hypothesis. The behavioral ratings were apparently measuring a different construct than the I-E Scale, or at least a different aspect of the phenomenon as their correlation was near zero.

Implications of the above findings and their generality to real life situations were discussed. Recommendations for further research were suggested in the forms of training programs and the development of Black models.

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DRIFTS IN LOCUS OF CONTROL AS A FUNCTION OF CROSS-CULTURAL EXPERIENCES

By

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A THESIS

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To my Parents

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

The present research is designed to examine some of the drifts or shifts in locus of control as a function of cross-cultural experiences. Internal locus of control refers to individuals who believe that reinforcements are contingent upon their own behavior, capacities or attributes. External control refers to individuals who believe reinforcements are not under their personal control but rather under the control of powerful others', luck, chance, fate, etc., (Rotter, 1966). An individual who attributes life's outcomes to skill will foster an internal perspective. His counterpart, who regards skill as incidental to his progress will form an external perspective of the world (James and Rotter, 1958; Crandall, 1963; Wychoff and Sedowsky, 1955; Phares, 1962). These perceptions of controlling forces in one's environment have led to the development of the present Internal-External (I-E) Locus of Control construct. The measurement of this construct has been undertaken by various researchers (Phares, 1957; James, 1957; Rotter, Liverant and Crowne, 1961). The most recognized instrument has been developed by Rotter (1966). In Rotter's instrument the "items deal exclusively with the subject's belief about the nature of the world" (p. 10).

The items are constructed to measure generalized expectancy but none of the items are directly addressed to the preference for internal or external control.

Internal-External Locus of Control is determined by the effects of reinforcement upon expectancy (Rotter, 1954, 1955, 1960). A person's expectancies about reinforcement in the future are greatly due to the value of the reinforcements available and to his prior experiences with reinforcement. For example, the value and meaning of reinforcements and rewards vary across events and across individuals. What might be reinforcing for one individual in a particular setting may be totally worthless to someone else. This reinforcer therefore may have different effects on the expectancies of various individuals. Consequently these differences have great implications for the cultural differences highlighted in this study. In addition to the value of a reinforcement, the frequency of the reinforcement may also effect expectancy. Thus, an expectancy for reinforcement in the future is diminished when the reinforcement schedule has been low. When applied to this study, it would indicate that individuals in a culture such as the Black culture, who have had relatively little relevant or positive reinforcement for social and economic achievement, would have a low expectancy for reinforcement of subsequent achievement. This is supported in the work by Goodnow and Pettigrew (1955), where differential reinforcement experiences had marked differences on ensuing

expectancies. When placed under extinction conditions, subjects who had high reinforcement schedules adapted significantly quicker when reinforcement was reinstated than did subjects with low reinforcement schedules. Goodnow and Pettigrew stated the underlying variable of their finding as an expectancy for success based on prior successful experiences. While the view of expectancy presented by Goodnow and Pettigrew has been well documented in the literature (Feather, 1963; Aronson and Carlsmith, 1962; Lowin and Epstein, 1965; Brock, Edelman, Edwards and Schuck, 1965), a second form of expectancy should be distinguished in order to broaden the concept of expectancy. The distinction is made between: 1) an expectancy for success versus failure and 2) an expectation or belief that one's success and failure is, or is not, due to his own actions or lack of actions (Crandall, 1974).[1] Although an individual may have had a history of successful experiences, if he does not attribute the outcome of these experiences to his artistry, his perception may be quite external. There is some indication that these expectancies for success and/or failure may be culturally influenced. Inasmuch as certain cultures in America have not had free access to the social and economic reinforcers, their expectancies for success have been rather low. Researchers (Battle and Rotter, 1963; Lefcourt and Ladwig, 1965a, 1965b; Crandall, Katkovsky, and Crandall, 1965;

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[1] V. C. Crandall, personal communication, February 7, 1974.

Rotter, 1966) have reported that Blacks and lower class individuals typically score higher in external locus of control than do Whites and middle class individuals. This means that Blacks and lower class individuals as groups perceive "others" or external forces as being the controlling factors of their lives, while Whites and middle class individuals as groups see themselves as the controlling forces in their lives.

In reviewing the above literature invariably the internal perspective, with the exception of the extreme internal viewpoint, arises as the most intelligent, competent and desirable locus of control. Inasmuch as externality has a high frequency of occurrence in minority populations, one must be careful not to transfer inappropriately the implicit negative connotations of externality to these minority populations. The reader should be reminded that externality is a socially learned construct and not an inherent racial distinction. Furthermore, this external construct has been learned as a function of the subordinate role minorities have played in America. It is the experiences and feelings associated with this subordinate role which has brought about this externality. As indicated by Gurin, Gurin, Lao, and Beattie (1969) events may correctly be perceived by Blacks as external but have nothing to do with randomness or luck. Focusing on external factors may be motivationally healthy for Blacks instead of damaging when it concerns assessing

one's probabilities for success against systematic and real external obstacles rather than exigencies of fate. Thus an internal response reflecting acceptance of blame for one's failures which might be considered "normal" in the typical middle class experience, may be extreme and intrapunitive for a Black person having grown up in poverty, in the ghetto.

This study attempts to examine the effects of a situational modification of these experiences. It is hypothesized that Blacks, placed in and reinforced for a dominant, decision-making role, will experience a shift toward internality. If, of course, this dominant decision-making role is not permanent or congruent with other roles in the individual's repertoire, the shift will only be a situational one. This expectancy is supported by Williams and Stack (1972), who found situational factors to be of primary concern in predicting and interpreting the behavior of Black subjects. They found that given appropriate attention to expectancies and reinforcement value, Blacks performed in an internal, achievement-oriented manner. Their results also concur with the present study's premise that Blacks do not perform internally in subordinate settings as a result of their role in a White middle class society.

The contention that internality can be learned in the appropriate environment is supported and expanded by Hunt and Hardt (1969) in their comparison of Black and White students in the Upward Bound Program. In their study both

Blacks and Whites increased in motivation for college, interpersonal flexibility and orientation for the future, though all these variables may naturally increase with age. Increases in measures of self-esteem and internal control were observed only for the culturally disadvantaged high school students, and these variables do not typically increase with age. The fact that self-esteem and internal control measures increased only for "culturally disadvantaged students" suggest that the potential for increasing internality may be greater with minority groups than with majority groups. This is not at all surprising, if one considers that most majority groups have had prior successful experiences with expectancy and reinforcement. It may be somewhat naive therefore to imagine that more training should produce a significant increase for majority groups.

If we accept the findings of Hunt and Hardt (1969), it appears that internality may be acquired through training. Additionally, it appears that such training programs were most effective with minorities. Gore and Rotter's work (1963) may serve as a starting point for developing a training program to achieve this increase in internality. They found that means on the I-E test followed closely the degree of social-action taking. Those individuals who were more inclined to view themselves as determiners of their own fate tended to commit themselves to more personal and decisive social action. If we may assume their premise

functions conversely, individuals who assume more personal and decisive social action are more inclined to regard themselves as determiners of their own fate. Thus we arrive at the central theme of this study which may be simply stated: those who have the opportunity to control their own fate will become more internal.

In order to develop a program which will attempt to situationally alter the experiences, reinforcements and subsequently the expectancy for locus of control, a further exploration of the concomitants of the existing situation for Blacks is needed. Hence to fully understand the theme that those who have the opportunity to control their own fate will become more internal, it may be helpful to grasp how this opportunity was blocked. In order to alleviate a situation, it is helpful if one is cognizant of the situation. The terse account of the Black Experience provided by the following section will attempt to sensitize the reader to the purported blocked opportunities.

Black Experience

The focus here will be an attempt to give a minimal account of the Black experiences with which this study is concerned. It is by no means an attempt to give a history of struggles by the Black race.

In the history of Negroes--Blacks--Afro Americans, certain victimization has occurred. Some see this victimization as a hardship they have endured at the hands of the

White race. Others may see the situation as one of Black's allowing themselves to be victimized by the White race. The former point of view of powerlessness and marginality is one that is instilled in the main of the Black population. Ralph Ellison illustrates this feeling in the prologue to his Invisible Man, (Ellison, 1953, p. 7).

> I am an invisible man. . .I am invisible understand simply because people refuse to see me like the bodiless heads you see sometime in the circus sideshows, it is as though I have been surrounded by mirrors of bad distorting glass. When they approach me they see only my surroundings, themselves or figments of their imagination. . .indeed, everything and anything except me.

In their discussion of the roots of racism, Knowles and Prewitt (1969, p. 1) have quoted St. Clair Drake in his discussion of this victimization:

> Negroes in America have been subject to victimization in the sense that a system of social relations operates in such a way as to deprive them of a chance to share in the more desirable material and nonmaterial products. . . .They are 'victimized', also, because they do not have the same degree of access. . .

Fanon (1967, p. 7) has also tapped into this feeling in his introduction as he quotes Aime Sesaire:

> I am talking of millions of men who have been skillfully injected with fear, inferiority complexes, trepidation, servility, despair, abasement.

As we find the Blackman in this marginal status he has

two alternatives that marginal men often choose (Fairweather, 1967). He may become hostile and resort to revolutionary tactics or he may become apathetic assuming no responsibility at all. Despite which course is chosen by the Blackman there is a type of powerlessness with which he is faced. This powerlessness is discussed by the National Advisory Commission on Civil Disorders (1968, p. 205). In their reports they point out how the Blackman "lacks the channels of communication, influence and appeal that traditionally have been available to ethnic minorities within the city which enable them--unburdened by color--to scale the walls of the White ghettos in an earlier era."

Researchers in powerlessness and social learning (Seeman, 1963, 1966, 1967; Seeman and Evans, 1962; Nettler, 1957) have been concerned with the effects of powerlessness upon action. As stated in Jordan (1973) a feeling of powerlessness is inversely related to attempts of people to control the environmental factors in their life situations. That is, a high feeling of powerlessness is related to a low level of effort toward manipulating situations. The lack of effort exerted to manipulate unfair situations has resulted in marginal citizenry for the main of the Black populace.

The Blackman in his place of marginality must be raised to his rightful position of prominence. As Fairweather (1967, pp. 7-8) states "the problem of <u>our</u> society involves

changing both attitudes and behaviors inextricably associated with a marginal status, for marginal man is the product of his society." The writer would like to clarify the meanings that will be taken of "our society" and "his society" in Fairweather's statement in this particular study. The "our society" mentioned must be the Black society for no other will assume such a task. The "his society" mentioned for the most part must mean the White society for this is where much of the control has been maintained. However this is not an attempt to exonerate the Black society completely, for some control of the Blackman's marginality is found in the Black population.

Blacks must take some responsibility, because Black-White interactions, as all interactions, have required both parties to "play the game" (Pettigrew, 1964). For "the game" to work Blacks have had to defer and submit to the inferior role prescribed for them by White supremacists. However some Blacks chose not to play the game, a description of one who chose not to play the game is taken from the New York Tribune of April 24, 1889:

> . . .Before the torch was applied to the pyre the Negro was deprived of his ears, fingers, and other portions of his body with surprising fortitude. Before the body was cool, it was cut to pieces, the bones were crushed into small bits and even the tree upon which the wretch met his fate was torn up and disposed of as souvenirs. The Negro's heart was cut in several pieces, as was also his liver. Those unable to obtain the ghastly relics directly, paid more fortunate possessors extravagant sums for them. Small pieces of bone went for 25 cents and a bit of liver, crisply cooked, for 10 cents.

Implications of Black Experiences for Internal-External Control

Being cognizant of the brief account of Black experiences given in the preceding section, consider the impact of experiences on expectancy. If we concur that expectancy is a function of past experiences (Phares, 1957; Crandall et al., 1965) "the game" was anything but conducive to an expectancy for success. Increasing one's objective probability for success does not automatically increase his subjective perception of probability for success. One's subjective expectancy may not even be increased in circumstances where opportunities are rising. Some motivational relearning may be necessary to change expectancies so they conform to the present rather than past realities (Jordan, 1973).

In situations where Blacks have had past successful experiences, Blacks exhibit a greater expectancy for success. Lefcourt and Ladwig (1965a) had three groups of Black reformatory inmates compete against White stooges. The subjects were given a task to perform which was falsely represented to involve musical skills. Black inmates were stratified by their jazz experiences into three groups. The experiences ranged: 1) from jazz musicians, 2) to those who were or had been interested in jazz, 3) to those having no history of jazz interests. Individuals in these groups competed against White stooges, and the outcome was

contrived so that the White stooges consistantly won. All factors in the study were held constant except prior experiences and perceived personal competancy in the task. The jazz musicians, having the greatest experience in the perceived task, persisted in competition longer than the other two groups.

In a situation in which one has some basis on which to expect to be successful as in the study presented above, he may be observed to act in a competitive and achievement oriented fashion. However when an individual's expectancies are limited by situational variables, his competitive behaviors and achievement-orientations are altered. Epps (1969) suggests that situational factors for Black and White college students are quite different. The most striking differences in Black and White students as groups are in family income and in occupational and educational levels.

> The difference on the whole suggest that as groups, (Black) and White students express somewhat differing sets of modal experiences, differing modes of expression and communication and differing ways of viewing the world. These results imply that, in addition to problems of prejudice and discrimination, (Black) students at major colleges may simply find many aspects of the academic community tailored for someone else. (p. 10).

As was pointed out by Epps there are some drastic differences in Blacks and Whites, yet these differences have not been widely considered in assessing the expectancies and locus of control for Blacks. It appears that many

researchers, some of whom have been more in tune with these Black distinctions, have found I-E control not to be the unitary concept it was presumed to be in earlier research. In the context of children's beliefs, Crandall et al. (1965) noted the importance of distinguishing different types of external environmental forces. In their view, control by impersonal forces should be separated from control by other people since certain successes and failures may have little to do with chance or luck, but still be subject to external control. Hersch and Scheibe postulated that control should be separated further as they observed that people who score highly externally often exhibit greater variance in behavior than people who score strongly internally. Consequently they concluded that the meaning of externally should be further differentiated. They also stress the need to assess how realistic it is for a person to perceive that events are beyond his control and whether he considers external forces to be benevolent or malevolent. Gurin et al. (1969) support that possible advantages of external control for Blacks as they point out that the literature has neglected the fact that an internal orientation may have negative implications. An unjustified internal orientation may lead to inappropriate self-derogation and self-blame. For example, in Blacks who have encountered social constraints associated not only with race but also with low-income and lower-class status, an internal orientation based on responsibility for their failures

may be more reflective of intrapunitiveness than of efficacy. Gurin et al. (1969) also states that low-income groups experience many external obstacles that have nothing to do with chance. These are class-tied obstacles which may be viewed appropriately by the low-income person as external but not as a matter of randomness or luck.

Gurin et al. (1969), in assessing the attitude structure of Black college students, found the I-E construct not to be a unidimensional concept. By factor analysis, the Gurin study developed a distinction between self and other in one's perception of control. Items with a first person referent were grouped under self or personal control, which is very close to the conceptual definition of internal control given by Rotter (1966). Items with a third-person referent were grouped under ideological control (Protestant Ethic Ideology), which is one's general beliefs about the role of internal and external forces in determining success and failure in the culture at large. The Gurin et al. identify the separation of personal and ideological levels as vital in differentiating between Black and White populations. They found that Blacks feel as strongly as Whites that people in general control their destinies. However, a difference does appear in responses to questions using personal referent. Blacks are less internal than Whites in answering questions about their own life experiences. Though Blacks adopt general cultural beliefs about internality, their experiences tell them that

those beliefs cannot be applied in their own situations. Whites are less likely to perceive this inconsistency between cultural beliefs and what works for them, since they have not had the experiences Blacks have had with discrimination and racial prejudice.

Overview

The focus of the preceding review has been to set in perspective the internal-external locus of control construct as it relates to Black people as a group. It is not enough to simply dispel the stigma of Blacks as inferior by reason of externality, but it becomes incumbent on this author and other researchers to offer, study, and explain alternate interpretations and motivations for externality (Crandall et al., 1965; Gurin et al., 1969; Hersch and Scheibe, 1969). Furthermore it seems that what Rotter (1966) termed internal or external may not be such a unidimensional concept (Crandall et al., 1965; Gurin et al., 1969; Lao, 1970). This implies that the high incidence of external scores by Blacks on the Rotter Scale may not represent a true reading of externality as it is most commonly construed. In support of this premise, Blacks have been observed to perform internally in situations in which they have some expectancy for success (Lefcourt and Ladwig, 1965; Williams and Stack, 1972). However, when expectancy for success is low, Blacks have operated in an appropriate external manner (Gurin et al., 1969). This external behavior in Blacks as a group when expectancies for

success are low, has been labeled the blocked opportunity theory which is defined as ". . .the prolonged exclusion of (Blacks) from American economy and social life" (Caplan and Paige, 1968, p. 15). Forward and Williams (1970) supported the blocked opportunity theory in their study of Detroit rioters. They found young Black militants to be those who had developed some confidence in their ability to shape events in their own lives if given the chance. From this, it appears that if given the chance to control their own destinies, Blacks behave in an internal fashion.

Experimentally, the present study attempts to give Blacks the chance to control their own fate. Involving Black students in a game situation which simulates a reversal of their typical life circumstances presents them with the opportunity to control their situational fate.

A simulation game was employed because of its "economy, visibility, reproducibility and safety" (Raser, 1969, p. 41). Economically it is understandable that a model would be cheaper to produce than the event in the natural setting. The simulation aids in highlighting the expectancy phenomenon as well as allowing a construction and reversal of the situation as it exists in the natural milieu. Reversal of a natural situation is much safer and more ethical in a simulation than in the real world. The game allows the opportunity to "pluck out of social life generally a circumscribed arena, and attempt to reconstruct the principal

rules by which behavior in this arena is governed and the principal rewards that it holds for the participants" (Coleman, 1966, p. 4). Coleman believes that simulation games and most other games constitute a kind of "caricature of social life." Drawing from Piaget's research, Coleman notes ". . .that for children games are more than a caricature of life; they are an introduction to life--an introduction to the idea of rules. . ." (p. 3). If we are indeed introduced to life and rules through games as Coleman proclaims it would be quite appropriate to return to games when relearning and restructuring is attempted.

The game "Simulated Society"(SIMSOC, Gamson, 1972) in particular is valuable in the simulation proposed because it does not constrain the environment and make the player's choices more apparent than real. The environment in SIMSOC is minimally programmed to insure many alternate ways of playing that may work equally well. Gamson (1972) reports that a major design challenge has been to keep the forces in balance so no single course of action appears to be the best for all players.

By modifying the SIMSOC procedure slightly, it was possible to elicit the desired effects ethically, economically and safely. One modification of SIMSOC was the delegation of power positions by race rather than by chance. Two separate games were administered, one with Blacks having the power positions and the other with Whites having the power positions.

The Black dominated game represented the reversal situation while the White dominated game was the status quo.

Operational Hypotheses

Game experiences that more closely simulate the natural milieu are expected to have the least effect upon shifts in locus of control. The more diametrically opposed the game experience is to the natural milieu the more effect it has on the shift in locus of control, provided the game experience is not so removed from the natural experience that it cannot be absorbed.

A greater shift in Black externals toward internality is expected than White internals toward externality. In addition Blacks who are not awarded personal power in the Black dominated game experience, will shift toward internality through identification with their racial peers.

Life experiences in the natural situation may be difficult to counteract with a brief reversal game experience. Therefore situational measures may indicate more of a change than generalized measures.

Experimental Hypotheses

1. Blacks in power positions in the Black game should have more movement toward internality than any other treatment group.
2. Blacks without power positions, in the Black game should have a shift toward internality through identification with Blacks in power.

3. Whites without power positions in the Black game may experience a slight shift toward externality.
4. No substantial shifts are expected in the White game.

CHAPTER II

METHOD

This study is based on the premise that Internal-External Control is learned construct and is a function of one's past experiences. Therefore, if one is given the appropriate experiences, it is quite possible to increase one's internality. In illustration of this point, the plan of this study was to situationally induce internality in Afro-American by experimentally altering their experiences. These new experiences were conferred through participation in a simulated society game (SIMSOC). Shifts in generalized expectancy as a result of these experiences were measured by the Rotter I-E Scale. Observational ratings were employed as a potential measure of the effects of the experiences on situational expectancy.

Subjects

The participants in the study were drawn from members of introductory psychology courses at Michigan State University. Students were issued a brief demographic questionnaire and the Rotter I-E Scale in their psychology classes. From this pool of 700 students, 71 subjects were randomly selected with the restriction of predetermined sex and race ratios. All subjects

were paid two dollars and were offered five extra credit points. The compensation received by subjects was independent of their roles or degree of participation in the game.

Experimenters

There were six experimenters involved in the research. Two experimenters served as the coordinators of SIMSOC as outlined by Gamson (1972). The other four experimenters rated the situational behaviors of the players. The experimenters were selected to be as heterogeneous as possible in respect to race and sex. This heterogeneous selection was in keeping with that of the subject population and was a control for the extraneous variables which may have been introduced by a homogeneous sexual or racial hierarchy. Therefore the experimenters were composed of two Black males, one White male, one Black female, and two White females. Five of the experimenters were undergraduate students at Michigan State University. The author served as one of the coordinators but had no input in the observational ratings.

Instruments

The nature of the present study, being situational and counterbalanced, called for little demographic material. Information deemed necessary for this study included age, sex, and race. Other information such as name, address, phone number and convenient times to be called were included to aid in administration but were not included in any analysis (Appendix A).

Rotter Internal-External Locus of Control Scale

The Internal-External Locus of Control Scale (Rotter, 1966) referred to as the I-E Scale is a 29 item forced-choice test. Included in the 29 items are six filler items intended to make the purpose of the test ambiguous. The test is scored by the total number of external choices, and is considered to be a measure of generalized expectancy. "The items are constructed to deal exclusively with the subject's belief about the nature of the world" (p. 10). The internal consistency of the test has been shown to be stable in various samplings. The test-retest reliability for combined males and females over a one month period was found to be .72. The test shows reasonable homogenity considering that items are sampling broadly generalized characteristics over a number of different situations. The test appears to be more valuable in the investigation of group differences than for individual prediction (Appendix B).

SIMSOC

SIMSOC (Simulated Society) is a game developed by Gamson (1972) to focus on the establishment and maintenance of social order. It creates a situation in which the participant must actively question the nature of social order and examine the processes of social conflict and social control. SIMSOC does not attempt to emulate a real society in every respect, but characteristics are included to highlight certain issues and problems.

SIMSOC is characterized by a mixture of mutual dependence and conflict, of partnership and competition among the players. It requires participants to confront certain central problems of collective decision-making as an organizational problem. SIMSOC offers at least three central focuses: 1) the processes of large-scale conflict, protest, social control and social change; 2) the exploration of interpersonal feelings, communication trust and other aspects of face-to-face interaction; 3) the challenge of creating utopia. Despite the variability of forms taken by SIMSOC, all SIMSOC games generally pass through three phases: 1) problems of scarcity, 2) problems of power and authority, and 3) problems of prosperity. Though the visibility of these phases may vary for different administrations, it usually is possible to observe all three in some form.

Procedure

Each subject had previously completed a demographic questionnaire and the Rotter I-E Scale which had been distributed in their psychology courses about 6 weeks earlier. From this information subjects were randomly assigned to one of two groups to represent the greatest heterogenity with respect to sex and race. Both of the groups discussed below engaged in a modified version of SIMSOC. A set of instructions (Appendix C) continaing the modifications was distributed and discussed prior to beginning the game.

One modification of SIMSOC which was not discussed with the subjects was the delegation of power position by race rather than by chance. The first game, which somewhat represented the status quo, engaged Whites in the power positions while Blacks held the nonpower positions. The second game, representing the reversal experience, employed Blacks in the power positions with White subjects in the nonpower positions. In each game there was a minority of the subordinate population who were delegated to power positions. Power was defined as being head of one of the basic groups (Basin, Pop, Empin, Masmed, and Judco, see Appendix C), or possessing a travel or subsistence agency. In addition the three regions in which players "lived" were a function of their power positions. The green region was completely composed of the dominant race who held most of the power. The yellow region was racially integrated and was moderately powerful. The red region was totally composed of the subordinate race and was void of any power.

Each game was composed of four half-hour sessions with a five minute break between sessions. One of the purposes of the break was to allow the coordinators time to tabulate game statistics (national indicators). The game statistics were necessary for the operation of the game for each subsequent session; however, there was no analysis of nor inferences drawn from this data.

To control for the apathy that is generated when

players believe the society is coming to an end (Gamson, 1972), participants were told there would be five sessions rather than four. The time allowed for the fifth session was used by the coordinators to re-administer the Rotter I-E Scale, to pay subjects and to sign extra-credit cards.

Before any formal training of coordinators and raters was undertaken, the experimenters were instructed to read Gamson's (1972) participant's manual (coordinators read the instructor's manual as well as the participant's manual). Subsequently the experimenters were participants in a SIMSOC game administered as part of the curriculum of an advanced undergraduate sociology class at Michigan State University.

Following these initial experiences, raters received extensive training on a video tape of one region's responses in a previous SIMSOC. During this segment the experimenters were monitored for improper scoring and instructed in correct responses. Improper scoring consisted of either choosing the incorrect locus of control or choosing an unrelated guideline statement (Appendix D). After experimenters became clear on the task they were to perform, the format shifted to an examination of rater agreement. Raters then scored new, five minute segments of the video tape to establish inter-rater reliability. Raters had to agree on all three of the following criteria in order to demonstrate agreement: 1) the specific taped statement which was rated, 2) whether the statement was internal or external, 3) and which

guideline statement was the model. The raters reached an average of 73 percent agreement on the last of 8 days of training. Subsequent to training, yet prior to the experiment, the experimenters assumed in a pilot game the roles they would perform later in the actual experiment.

In the pilot as well as the actual study, the coordinators were positioned in the corridor so that they were centrally located between the three classrooms which housed the three regions. The location of this station was important to insure that a travelling player would pass the coordinators before entering another region. The function of the coordinator was to collect travel tickets, subsistence tickets, tabulate national indicators, serve as the broker for Basin and answer procedual questions. The coordinators were guided by the SIMSOC instructions (Appendix C), participants manual and instructors manual (Gamson, 1972).

The raters were stationed in the individual regions, one rater to each region (with the extra rater designated as an alternate). The raters identified and scored subjects' statements as internal or external. The statements had to be directly related to a statement on the "Rating Guidelines" (Appendix D) before they could be scored. Statements that were perceived as internal or external, but could not be related to a specific model statement in the guidelines, were not scored. The raters operated on alternating on-off five minute segments. Any statement made during an off segment was not scored regardless of its content.

CHAPTER III

RESULTS

Biases in Interpreting the Results

Inequality of Groups

Randomization was employed in assigning individuals to groups within sex and race. This consequently meant that power positions were randomly distributed among Whites (and a few Blacks) in the White game, and randomly distributed among Blacks (and a few Whites) in the Black game. Despite the randomization there were observable pre-test differences between groups. Initial differences were observed between White and Black subjects on the Rotter I-E Scale: as expected the mean score of White subjects was more internal (lower) than the mean score of Black subjects, (Table 1). In addition to the expected differences in racial groups, all power groups were uniformally more internal from the beginning than nonpower groups, though this difference did not reach significance (Table 1). This phenomenon was unanimously upheld across groups, which obviously presents problems in interpreting post-test data. It is quite apparent that one cannot conclude internal control is a function of power by inspecting post-test data alone. However, it is possible to consider the amount of movement from pre-test to post-test. A procedure

of this nature controls for the initial starting point of a group by measuring the amount of movement toward internality rather than the final or post-test score of internality. Mathematically this procedure may be sound, however theoretically it is confounding. If one hypothesizes that internality covaries with power such that an increase in power increase internality, it would follow that an internal individual has had prior exposure to power. Thus, a treatment of power upon an individual accustomed to power may not move him along the gradient toward internality at the same rate as an individual unaccustomed to power. This resounds the principle that the value of a reinforcer is dependent upon the individual's past experiences. In addition, internal groups have less variance of movement available to them than external groups. These factors may be suppressing the effects of power on this study since the power groups were initially more internal.

TABLE 1

PRE-TEST MEAN DIFFERENCES ON ROTTER I-E SCALE FOR BLACK AND WHITE POWER GROUPS

	Power		
	Power-Position	Non-Power Position	$t = 1.57$ p = NS
Race	Blacks 12.33	13.7	Overall Blacks 13.05
	Whites 9.69	12.19	Overall Whites 11.07
	Overall Power 10.77	Overall Non-Power 12.77	

Incongruent Measures

The main measures of the study, the Rotter I-E Scale and the observational, behavioral ratings seemed to be measuring two distinctly different phenomena. The correlations of these two measures were not significantly different from zero. The correlation coefficient of behavioral ratings and Rotter pre-test scores was $\underline{\gamma} = -0.0323$; of behavioral ratings and Rotter post-test scores, $\underline{\gamma} = -0.0972$. It is quite apparent that these correlation coefficients do not represent any relationship between measures; however, it is not clear what implication should be drawn from these coefficients. Possibly the phenomena being measured were totally different, or perhaps there is quite a discrepancy in what people are observed to do, compared to what people report.

Treatment Effects

Hypothesis Related Analysis

As will become evident later the main and interaction effects of the ANOVA analyses were not strikingly significant. However, movement toward internality on the Rotter Scale was observed in certain key groups which were directly supportive of the hypotheses. Since these observations were felt to be of prime importance they were made despite the outcome of the corresponding overall $\underline{F}$ test (Winer, 1962). Student's $\underline{t}$ distribution was employed to evaluate the significance of movement in the individual comparisons indicated by hypotheses

one and two. An orthogonal comparison was used to test hypothesis four.

Hypothesis I: The first hypothesis states:

> Blacks in power positions in the Black game should have more movement toward internality than any other treatment group.

Hypothesis one is clearly supported as the movement toward internality of Blacks with Power in the Black Game is significant $p < .025$. Furthermore this is the only group which has significant movement toward internality (lower scores) on the Rotter Scale (Table 2).

TABLE 2

GROUP MOVEMENTS TOWARD INTERNALITY
ON THE ROTTER I-E SCALE

Groups	Mean-Pre	Mean-Post	Movement
Blacks with Power-Black Game	12.63	9.88	$t = 2.815$ df = 7 $p < .025$
Blacks without Power-Black Game	14.6	12.0	$t = 3.0$ df = 2 $p < .09$
Whites without Power-Black Game	10.91	9.36	Wrong by inspection ($t = 1.28$ p = NS)
Whites with Power-White Game	10.6	11.0	
Whites without Power-White Game	15.0	16.4	$t = .1473$ df = 21 p = NS
Blacks without Power-White Game	13.29	12.0	

Hypothesis II: The second hypothesis states:

> Blacks without power positions in the Black game should have a shift toward internality through identification with Blacks in power.

Hypothesis two was not clearly supported on the Rotter Scale since Blacks without power in the Black Game did not move significantly toward internality (lower scores). However there was an observable trend in the predicted direction $p < .09$. Though significance was not reached the data was consistent with the direction of prediction (Table 2).

Hypothesis III: The third hypothesis states:

> Whites without power positions in the Black game may experience a slight shift toward externality.

Hypothesis three was not supported by movement on the Rotter Scale. Though the movement that did occur was not significant it was in the internal direction (lower) while the hypothesis was in the external direction. The movement data of this group was not even consistent with the predicted direction (Table 2).

Hypothesis IV: The fourth hypothesis states:

> No substantial shifts are expected in the White game.

Hypothesis four was tested and tentatively supported by the orthogonal comparison of movement in pre-test--post-test means on the Rotter I-E Scale. The group means tested were the groups which participated in the White Game. The orthogonal comparison was made because the hypothesis was not specific to any particular group but an overall prediction

of all groups in the White Game. As predicted there was no significant movement in the White Game (Table 2).

ANOVA Analysis: Rotter I-E Scale and Behavioral Ratings

Main effects. The design of the analysis was essentially a 2 X 2 X 2 X 2 factorial on the Rotter I-E Scale and a 2 X 2 X 2 factorial on the behavioral ratings. Given a near zero correlation between the instruments, the analyses were handled separately. The four main effects of the Rotter Scale ANOVA were: (Table 3)

1) Race (A)
   Blacks (A_1)
   Whites (A_2)

2) Power (B)
   Power Position (B_1)
   Non-Power Position (B_2)

3) Game (C)
   Black Game (C_1)
   White Game (C_2)

4) Time (D)
   Pre-Test (D_1)
   Post-Test (D_2)

The main effects of the behavioral ratings took the same dimensions as the Rotter with the exception of Time. Time was excluded due to the situational nature of the ratings (Table 4). An inspection of the Behavioral Rating ANOVA summary table (Table 4) will not indicate any significnat main effects in the rating analysis. The Rotter analysis indicates a significant effect of Power ($p < .05$, Table 3). Power appears to be the most potent single treatment. subjects in power position tested more internally (lower) on the Rotter Scale than subjects in nonpower positions, across the other three treatment variables. However, as previously stated the subjects who were placed in power

TABLE 3

SUMMARY OF ANOVA FOR ROTTER I-E SCALE

Source	df	Ms	F
Race (A)	1	7.6723	<1
Power (B)	1	152.3253	4.43*
Game (C)	1	41.4070	1.20
A X B	1	6.2336	<1
A X C	1	121.9227	3.55**
B X C	1	7.5682	<1
A X B X C	1	0.5535	<1
Error I	40	34.3779	
Time (D)	1	15.2135	2.1393***
A X D	1	11.3130	1.5908***
B X D	1	0.0011	<1
C X D	1	11.3762	1.5997***
A X B X D	1	0.0504	<1
A X C X D	1	0.1793	<1
B X C X D	1	0.4988	<1
A X B X C X D	1	1.1152	<1
Error II	40	7.1114	

*$p < .05$

**$p < .10$

***$p < .25$

positions were initially more internal than those in nonpower positions. Therefore, the true significance of power may not be represented by this analysis.

TABLE 4

SUMMARY OF ANOVA FOR BEHAVIORAL RATINGS

Source	df	MS	F
Race (A)	1	.011875	<1
Power (B)	1	.002157	<1
Game (C)	1	.075806	<1
A X B	1	.397610	5.234259*
A X C	1	.197642	2.601819**
B X C	1	.00070	<1
A X B X C	1	.177850	2.341271**
Error	39	.075963	

*p < .05

**p < .25

Interaction effects. Although the power variable on the Rotter was the only main effect to reach significance, there were no interactions with power. A Race X Power interaction did gain significance on the behavioral ratings ($p < .05$), yet a test of simple effects could not attribute the variance to a specific effect, but attributed the variance to the overall effect of the interaction (Table A1, Appendix E). Though the simple effects test failed significance, the

table of means indicates that Blacks in power and Whites not in power are more internal than Blacks not in power and Whites in power (Table 5).

TABLE 5

MEANS OF RACE X POWER (RATINGS)

		Power (B)	
		Power Position (B_1)	Non-Power Position (B_2)
Race (A)	Blacks (A_1)	.338295	.557489
	Whites (A_2)	.533974	.279852

The Race by Game interaction presents an interesting theoretical contradiction in group assignment ($p < .10$). The data of the Rotter Scale would indicate that the setting or game controlled by the other race would be more conducive to internal control (Table 6). However, since this effect does not involve an interaction with time it is difficult to assume that the data represents a change. Therefore an excessive amount of internals were assigned to the game controlled by the other race. The greatest amount of variance was found to be between Whites in the White Game and Whites in the Black Game ($p < .01$, Table A2, Appendix E). Some degree of variance is also attributed to the difference between Blacks in the Black Game and Whites in the Black Game ($p < .05$, Table A2, Appendix E).

TABLE 6

MEANS OF RACE X GAME (ROTTER) OVER PRE-TEST AND POST-TEST SCORES

		Game (C)	
		Black Game (C_1)	White Game (C_2)
Race (A)	Blacks (A_1)	12.3	11.07
	Whites (A_2)	8.63	13.27

Collapsed Treatment Effects

It was evident that certain treatment groups had small sample sizes which may have had an adverse effect upon significance. These small treatment cells were eliminated by ignoring the game effect which would have two sample populations in each remaining condition. The cell having the largest population was retained while its parallel cell was eliminated. The groups retained from the Black Game were Blacks with Power and Whites without Power, those retained from the White Game were Blacks without Power and Whites with Power. The design was subsequently altered to a 2 X 2 X 2 factorial in the Rotter Scale analysis, and a 2 X 2 factorial in the behavioral rating analysis. Since the game effect was included in the original design these proposed analyses would be posteriori considerations. An experimenter may make priori and posteriori comparisons in the same experiment, after the experimenter makes the planned

comparisons (Kirk, 1968). The focus of these posteriori comparisons is on the Race and Power dimensions on both the Rotter Scale and Behavioral Rating measures. The Time dimension is also included on the Rotter measurement. Consequently there is no consideration of the effect of Game, but only the effect of Race, Power and Time.

Analysis of the posteriori comparisons (Table 7 and 8) failed to exhibit greater significance on the F test than the priori comparisons. The overall F test of the posteriori comparisons displays considerably less significance than the priori comparisons. However there was an interesting finding. The main effect of Time increased from nonsignificance ($p < .25$, Table 3) to a trend in support of the predictions ($p < .10$, Table 7).

TABLE 7

SUMMARY OF ANOVA FOR ROTTER I-E SCALE
(WITH THE EXCLUSION OF GAME)

Source	df	MS	F
Race (A)	1	37.425	<1
Power (B)	1	2.2375	<1
A X B	1	17.9777	<1
Error I	31	39.7356	
Time (D)	1	28.6673	3.7367*
A X D	1	8.8888	1.1586
B X D	1	.2554	<1
A X B X D	1	12.3762	1.61322**
Error II	31	7.6718	

*$p < .10$ **$p < .25$

TABLE 8

SUMMARY OF ANOVA FOR BEHAVIORAL RATINGS
(WITH THE EXCLUSION OF GAME)

Source	df	MS	F
Race (A)	1	.021638	<1
Power (B)	1	.187169	2.839336*
A X B	1	.148002	2.245176*
Error	30	.065920	

*$p < .25$

Summary of Results

As was reported earlier, a monumental incongruity was evident between the Rotter Scale measurement and the Behavioral Ratings. A near zero correlation was reported between Behavioral Ratings and Rotter pre-test scores ($\gamma = 0.0323$) and between Behavioral Ratings and Rotter post-test scores ($\gamma = -0.0972$).

The hypotheses were generally supported through individual comparisons of movement from pre-test to post-test scores. The first hypothesis was clearly supported as Blacks in Power in the Black Game moved more toward internality than any other group ($p < .025$, Table 2). There was a trend in support of the second hypothesis as Blacks without Power in the Black Game exhibited some movement toward internality ($p < .09$, Table 2). The third hypothesis was not supported

as Whites eithout Power in the Black Game did not move toward externality but remained relatively unchanged with some inclination toward internality. Hypothesis four was tentatively supported as the orthogonal comparison of group means in the White Game reflected no significant changes.

CHAPTER IV

DISCUSSION

A number of researchers have studied the Internal-External Locus of Control construct. Many of these researchers have studied how the construct relates to Blacks and lower class individuals, only to report these groups to be more external than Whites or middle class individuals. For the most part, these researchers have not been attuned to the experiential differences in power and expectancy for Black and White populations. These differences may not only be attributed to prejudice and discrimination, but Blacks as a group may experience many aspects of American life to be tailored for someone else. Hence, the role in American life for the main of the Black populace has been one of subordination. It is this subordinate role which has caused feelings of powerlessness, low expectancies for success and consequently an external locus of control. However, when appropriate attention is given to expectancies and reinforcement value, Blacks have been observed to perform in an internal, achievement-oriented manner (Williams and Stack, 1972). This implies that some motivational relearning may be necessary to change expectancies so they conform to the present rather than past realities (Jordan, 1973).

Hypothesis Related Findings

The research strategy of changing expectancies among Blacks by placing them in a situation where they have the opportunity and power to control their fate has been demonstrated to be valid in the present study. Black subjects placed in the Black dominated game and given power positions in the game move significantly toward internality ($p < .025$, Table 2). This finding, which supports hypothesis I, is the central point of the study. It is apparent that in a Black controlled situation, the individuals in control rise in internality (score lower on the I-E Scale). Inasmuch as the Rotter Scale was used to measure locus of control, the data may primarily represent a rise in internal personal control. It is possible that feelings of self-control, self-esteem and self-determination are elevated through an increase in Black consciousness, which may be created or at least enhanced, in the Black controlled game. Therefore, it would be quite consistent for self-control, self-esteem and self-determination to covary with personal control. It seems reasonable to assume that Black subjects having control of their situation should adopt self-concepts consistent with the roles they occupy. However, the data is more than a test of acting ability or role involvement. Considering that the Rotter Scale is a measure of generalized expectancy this suggests that there may have been some internalization of internal personal control. Nevertheless,

a follow-up study would probably report that these subjects had returned to their former locus of control. To create a more lasting effect one would need a stronger and extended treatment subsystem combined with environmental reinforcers. Despite the length or power of the treatment, if the subject is returned to an unchanged environment, the treatment effects will be in jeopardy.

The above data combined with the following findings indicate that a vital factor in eliminating the inconsistency between general and personal beliefs of locus of control, is being in control. Blacks without Power in the Black Game were hypothesized to become more internal through identification with Blacks in Power. Hypothesis II, however, was not confirmed, though there may have been some identification as there was a trend toward internality ($p < .09$, Table 2). While it is possible that Blacks without Power positions did not strongly identify with those Blacks possessing power positions, it is also possible that the identification process was not allowed to reach it's full potential in a brief game situation. Even if the identification process had been allowed to reach it's full potential, such an identification cannot be expected and was not predicted to be as effective in boosting expectancies as actually being in control. As stated earlier, self-concepts should covary with personal control, and these self-concepts should vary with the role occupied by the individual. Thus, the ideological control

of Blacks without Power should be similar to that of Blacks with Power, yet differences are apparent in personal control. Blacks without Power are still being controlled by powerful others; however, these powerful others should possess less inhibiting variables for identification. Blacks with Power should be more congruent with the self-images of Blacks without Power than these self-images are to Whites. Therefore, the inconsistency between general and personal beliefs of locus of control are diminished but not eliminated. However, the identification is not as potent as actually being in control. This suggests that as more Blacks rise to positions of prominence, the expectancies for success in the race as a whole should rise. However, these data suggest that the expectancies of Blacks as a whole may not reach the expectancy level of those Blacks in prominent positions.

The expectancy level of White subjects in the Black Game remained unchanged. It was hypothesized that there might be a slight movement toward externality in White subjects without Power in the Black Game. However, hypothesis III was not supported. In fact, there was a slight, nonsignificant movement toward internality (lower scores) in the reversal of roles game. White subjects who were placed in the Black Game without Power positions apparently did not view themselves as being controlled by others. The successful life experiences of the White

subjects seemingly prevented the situational absorption of the expectancies associated with the game condition. It appears to be possible to raise the expectancies of the dominate game group without lowering the expectancies of the subordinate game group. This is quite contradictory to the arguments against racial equality presented by many White supremacists. These data indicate that it may not be necessary to lower or take away from one population in order to raise another. There may be no finite quantities in social science as there are in the natural sciences. In considering such a quantity as locus of control, there may be an infinite amount of internality. The analogy may over-portray the true situation, yet it typifies the limited resources arguments used by White supremacists.

The White (status quo) dominated Game failed to produce any substantial shifts, thus tentatively supporting hypothesis IV. If the White dominated Game truly represented the real world, subjects should be assigned roles in the game much like those of their own lives. Therefore if the experiences and expectancies of their roles in the Game simulate those of their own lives, there is no reason to expect a change in expectancies as a result of the Game. These results cannot be conclusively supported since it is difficult to assert the reason for no change. However the effect was predicted and it did occur, though the reason for occurrence cannot be conclusively asserted.

Comparison with I-E Literature

In reviewing the literature one finds that researchers (Battle and Rotter, 1963; Lefcourt and Ladwig, 1965a, 1965b; Crandall et al., 1965; Rotter, 1966) agree that Blacks and lower class individuals typically score higher in external locus of control than do Whites and middle class individuals. The findings of the present study marginally support this contention as the mean pre-test score for White subjects was 11.07 while the mean pre-test score for Black subjects was 13.05. These differences in locus of control are visible but do not seem to be as significant as reported in previous literature. The post-test differences in Black and White subjects' locus of control was negligible. The mean post-test score for White subjects was 10.72, while the mean post-test score for Black subjects was 10.95. This data corroborates the findings of Williams and Stack (1972) and Lefcourt and Ladwig (1965b). The present study as well as the former two found Blacks to act in an internal achievement -oriented manner when they have some basis on which to expect to be successful.

Additional Findings--ANOVA Analyses: Rotter I-E Scale and Behavioral Ratings

The results of the ANOVA analyses failed to gain significance on the predicted effects. One explanation for the lack of findings with the ANOVA could be the high degree of specificity of the predictions. The hypotheses, with

the exception of one, were each based on an individual group (i.e., Hypothesis I-A_1 B_1 C_1; Hypothesis II-A_1 B_2 C_1; Hypothesis III-A_2 B_2 C_1). These cells were predicted to change over Time (D) in the Rotter ANOVA. However, only the first two were predicted to move in the internal direction while the third was predicted to move in the external direction. In addition, the fourth hypothesis predicted no change in half of the total subjects. Therefore if the predictions were true, there would be potential for a counteracting effect in addition to a large suppressor effect. Hence, while hypotheses one and two were supported (or showed a trend) in the independent t tests, these effects did not surface in the ABCD interaction of the ANOVA. Of course, the independent t tests were directional individual comparisons while the ANOVA was a nondirection global analysis. In retrospect, it is improbable that the effects of two groups would be powerful enough to influence a main effect of Time, a two-way interaction with Time or even a three-way interaction with Time. These effects may not occur due to global effects being summed in the ANOVA. In short, with half the subject population expected not to change, one group expected to go in the external direction, and two groups expected to move in the internal direction, there were probably too many groups acting as suppressors to gain significance on a global ANOVA analysis.

A similar situation existed in the Rating ANOVA with

the exception that the situational nature of the measures meant that no change scores were involved. Therefore, the predicted effect should have surfaced in the ABC interaction of the ratings as it should have in the ABCD interaction of the Rotter analysis. If the predicted effect did not surface in the three-way interaction, it is quite improbable that the effect would counteract the suppressor groups in more global two-way interactions and main effects. These suppressor groups may have aided in the tenuous support of hypothesis four. Given that no interactions with Time reached significance (with the possible exception of the main trend effect ($p < .10$, Table 7) of Time in the Rotter analysis which excluded Game) it was quite consistent that the orthogonal comparisons derived from the ANOVA would be nonsignificant.

Methodological Considerations

The randomization procedure used to assign subjects to groups introduced considerable difficulty in interpreting the effect of Power. There was a visible but nonsignificant pre-test difference between power and nonpower groups. All power groups were initially more internal than their nonpower counterparts. This confounding materialized despite the random procedure employed in assigning to power. Though the number of power positions was predetermined for sex and race, the assignment of individuals to these power positions was quite random. The locus of control of individuals

assigned to power positions was also random. No explanations are immediately apparent as to why power groups contained subjects who were more internal than nonpower groups. One possible reason for the pre-test difference may be a sampling error of having too small a number of subjects in each treatment. Given that the F distribution is positively skewed, ranging only over nonnegative real numbers from zero to positive infinity, it approaches normality only for very large degrees of freedom (Kirk, 1968). Coupled with the problem of small cell frequency was the problem of unequal cell frequency, making the randomization process that much more difficult.

By the inclusion of a pre-test, the experimental design incorporated a guard against making erroneous interpretations. However if the pre-test had not been included, the significant main effect of power would have been falsely interpreted. In view of the lack of randomness presented by the randomization procedures, it may have been advantageous to match internals and externals in power to internals and externals not in power.

The second methodological problem was the incongruency of the two measures. The Rotter Scale and the Behavioral Ratings were uncorrelated, which raises considerable difficulty when speaking of the measurement of locus of control. It is clear that these measures were unrelated since they had a near zero correlation. It is difficult therefore, to

conclude that they were measuring the same construct. If we do assume these measures were measuring the same phenomenon, it must certainly have been different aspects of the phenomenon. The Rotter Scale samples broad generalized characteristics over a number of different situations. The ratings, however, sample a rather narrow range of behavioral statements in one specific simulation game. In addition, the Rotter Scale is a self-report inventory while the Ratings are observational. There appears to be quite a discrepancy in what people are observed to do, compared to what people report they do in general. This has been previously noted by several authors (La Piere, 1934; Kutner, Wilkens, and Yarrow, 1952) who found discrepancies in what subjects say they will do in an imagined situation, and what they in fact do in a situation.

There were also various extraneous variables which may have caused confoundings in the data. One of these variables was the difference in actions and awareness of Blacks with Power in the Black Game versus Whites with Power in the White Game. An overwhelming number of Black subjects reported that they had not realized Blacks were in control in the Black Game. It is questionable how subjects could have increased in internality if they were unaware of the situation. Whites in Power in the White Game realized they were in control, but the majority of the White subjects may have been more interested in being fair. White subjects may

have been concerned about being labeled as racist if they acted in an assertive manner. Therefore, White subjects in power may have been concerned with social desirability which may have been rated as external behavior. Rating the two racial populations presented further problems. The Black subjects on the whole were more active and vocal than White subjects. This presented two problems, the first being a greater chance to miss statements in the Black region as compared to the White region. Second, the situational measure of Blacks was more representative of their behavior since it was based on a larger sample of responses.

Implications for Further Research

As has been postulated numerous times in the present study, it is the subordinate role which Blacks have played in America that has fostered feelings of powerlessness and externality. If this subordinate role is allowed to persist, those bearing its chains will continue to have low expectancies for success. Certainly few, if any logical arguments have been made for the maintenance of the subordinate role, or the merit of low expectancies for success. Nevertheless, there have been interesting points raised on the inappropriateness of internal control in certain situations. An unjustified internal orientation may lead to inappropriate self-degradation and self-blame (Gurin et al., 1969). Based on these considerations, future research might choose either of the two following directions.

The first avenue may be to consider further cross-cultural studies to establish experiential differences in Blacks and Whites. As this and other studies have pointed out, some forms of internal control would be inappropriate for Blacks in certain situations. It would be inappropriate and maladaptive for a Black population or any population which does not possess the economic and/or social power to change its environment to see itself as the controller of its own fate. While the fate of Blacks may be controlled by powerful others, these are not amorphous others; nor is this control primarily a function of luck or chance. The power structures which control the fate of Blacks and other out-group populations are quite tangible, but also quite inaccessible to out-group populations. It has also been postulated in the present study that without environmental reinforcers, most if not all of the effects of training programs would be lost. Therefore, after studying the above implications researchers might devise training programs for internality. In devising these programs, researchers should be cognizant that locus of control is a multi-dimensional concept; one should know the goal of internality for the individual being trained to insure the program is tapping the correct dimension. Lao (1970) posits that educational and training programs should deal directly with the distinction between cultural and personal limitations, since experiences with skill-based reinforcements

have no effect on ideological control and only lead to further frustration. This example presented by Lao is a vivid illustration of what occurs when the training program is not congruent with the outcome goal. Thus, in considering a training program, researchers might be in tune with which programs might be appropriate and adaptive, how these programs might be accomplished, and the feasibility of and outcome of the program.

The second route which may be more long-range is to build models that confrom to the differences of Blacks and other out-groups. These models would pave the way for the development of a particular kind of Black psyche composed of Black experiences. In a society catered to one's own dimensions, it would not be necessary to train individuals to conform to unnatural situations. Thus, the first research implication would not be necessary. If such a psyche is not developed, Blacks will continue to patch together an existence from a society tailored for someone else. Without this Black psyche, many different training programs will be necessary to enable Blacks to exist in an unnatural environment. In the words of W. E. B. Dubois:

> History was so written as to make all civilization the development of white people; economics was so taught as to make all wealth due mainly to the technical accomplishments of white folks supplemented only by the brute tail of colored peoples; brain weights and intelligence tests were used and distorted to prove the superiority of white folk. The result was the complete domination of the world by Europe and North America and a culmination and tempo of

civilization signularly satisfactory to the majority of the writers and thinkers at the beginning of the Twentieth Century (Dubois, 1946, p. 37).

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APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

Appendix A

I am currently engaged in some psychological research and would greatly appreciate your participation. What I would like for you to do is to fill out the attached form at your convenience and bring it back to class on the announced day. You will receive one credit for doing so. A number of you may be asked to participate further in the study, for which you would receive additional credits. If you are willing to take part in our study, please fill out the information below and return it (attached to the completed questionnaire) on the announced day. Thank you for your time and consideration.

Name_____ Age_____ Sex_____

Address_____ Race_____

Phone #_____

Convenient time for me to call you (in general).

_____

APPENDIX B

INTERNAL-EXTERNAL LOCUS OF CONTROL SCALE

Appendix B

SOCIAL REACTION INVENTORY

We are interested in the way different people look at things which happen in our society. We have listed below 29 pairs of statements. You will probably agree more with one of the two statements than you will with the other one. Sometimes neither of the two statements will really say what you would like for it to say. If this happens, just choose the one which is closest to what you believe.

There are no right or wrong answers. Just choose the one which is closest to what you really believe, and circle the appropriate letter.

Go ahead and start. Remember to choose the one which is closest to what you really believe.

****

1. A. Children get into trouble because their parents punish them too much.

   B. The trouble with most children nowadays is that their parents are too easy with them.

2. A. Many of the unhappy things in people's lives are partly due to bad luck.

   B. People's misfortunes result from the mistakes they make.

3. A. One of the major reasons why we have wars is because people don't take enough interest in politics.

   B. There will always be wars, no matter how hard people try to prevent them.

4. A. In the long run people get the respect they deserve in this world.

   B. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

Social Reaction Inventory
Continued

5. A. The idea that teachers are unfair to students is nonsense.

   B. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. A. Without the right breaks one cannot be an effective leader.

   B. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. A. No matter how hard you try some people just don't like you.

   B. People who can't get others to like them don't understand how to get along with others.

8. A. Heredity plays the major role in determining one's personality.

   B. It is one's experiences in life which determine what they're like.

9. A. I have often found that what is going to happen will happen.

   B. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. A. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.

    B. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. A. Becoming a success is a matter of hard work, luck has little or nothing to do with it.

    B. Getting a good job depends mainly on being in the right place at the right time.

12. A. The average citizen can have an influence in government decisions.

    B. This world is run by the few people in power, and there is not much the little guy can do about it.

Social Reaction Inventory
Continued

13. A. When I make plans, I am almost certain that I can make them work.

    B. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. A. There are certain people who are just no good.

    B. There is some good in everybody.

15. A. In my case getting what I want has little or nothing to do with luck.

    B. Many times we might just as well decide what to do by flipping a coin.

16. A. Who gets to be the boss often depends on who was lucky enough to be in the right place first.

    B. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. A. As far as world affairs are concerned, most of us are victims of forces we can neither understand, nor control.

    B. By taking an active part in political and social affairs the people can control world events.

18. A. Most people don't realize the extent to which their lives are controlled by accidental happenings.

    B. There really is no such thing as "luck."

19. A. One should always be willing to admit mistakes.

    B. It is usually best to cover up one's mistakes.

20. A. It is hard to know whether or not a person really likes you.

    B. How many friends you have depends upon how nice a person you are.

21. A. In the long run the bad things that happen to us are balanced by the good ones.

    B. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

Social Reaction Inventory
Continued

22. A. With enough effort we can wipe out political corruption.

    B. It is difficult for people to have much control over the things politicians do in office.

23. A. Sometimes I can't understand how teachers arrive at the grades they give.

    B. There is a direct connection between how hard I study and the grades I get.

24. A. A good leader expects people to decide for themselves what they should do.

    B. A good leader makes it clear to everybody what their jobs are.

25. A. Many times I feel that I have little influence over the things that happen to me.

    B. It is impossible for me to believe that chance or luck plays an important role in my life.

26. A. People are lonely because they don't try to be friendly.

    B. There's not much use in trying too hard to please people, if they like you, they like you.

27. A. There is too much emphasis on athletics in high school.

    B. Team sports are an excellent way to build character.

28. A. What happens to me is my own doing.

    B. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. A. Most of the time I can't understand why politicians behave the way they do.

    B. In the long run the people are responsible for bad government on a national as well as on a local level.

APPENDIX C

SIMSOC INSTRUCTIONS

Appendix C

SIMSOC INSTRUCTIONS

You will shortly be participating as a citizen in a simulated society. You represent only some of the citizens of your society. Other citizens are present only in imaginary form--that is, certain rules of the game are based on assumptions about the reactions of these imaginary citizens. Nevertheless, this is basically your society to do with as you like.

There is no single right or best way to play the game. There are many alternative ways. You should try to keep an open mind about the possibilities available to you, and not assume that you cannot do something just because no one has thought of doing it before.

However some rules are needed for the operation of the game. The rules presented here in the instructions are intended to represent certain "natural" forces in the real world rather than man-made laws. To ignore them by cheating simply renders the game pointless and meaningless. The agreements that you make among yourselves are your own responsibility--they represent man-made laws rather than "natural" forces. If a player ignores or refuses to comply with a rule that your society makes, you must face the issue of how to deal with this behavior. All players have a responsibility to observe the rules in the manual to make the game operative but they have no such responsibility toward the rules that you may establish to govern yourselves. NO ACTUAL PHYSICAL FORCE MAY BE EXERTED.

Rules

Simbucks - The basic currency in SIMSOC

Region - All members of the society live in one of three regions (a) green, (b) yellow, (c) red, to which you must return at the beginning of each session.

Moving - Any player may move to another region by paying a moving fee of $10. to the bank.

Travel - One may travel between regions in two ways.

a) Public Transportation - A travel ticket may be obtained from people who possess travel agencies. A travel ticket is good for one trip, where a trip is defined as leaving and

returning to the home region with no more than one stop in each region. A trip is over when the traveler returns to his home region.

b) Private Transportation - A travel certificate may be purchased from the bank at a cost of $25. This allows unlimited travel to the purchaser of the certificate only.

c) Travel Agencies - Certain individuals will be designated as owners of travel agencies. These owners will receive fixed travel tickets at the beginning of each session which they can use, hoard, dispense, save or sell. Unused travel tickets may be carried over to future sessions.

d) Restrictions on Travel - A traveling member may not enter a region which is already inhabited by 50% of the society. He may be refused admission to a region by unanimous consent of the inhabitants who are present.

Subsistence

Every member of the society must provide for his subsistence for every session. He can do this by means of either a subsistence ticket or a Permanent Subsistence Certificate($25.). Subsistence tickets can be obtained from individuals owning subsistence agencies. These individuals receive five subsistence tickets at the beginning of each session and may dispense or not dispense of them in any manner they choose.

If a person fails to provide subsistence for a session, he loses his job and all other priviledges. If he fails to provide subsistence in two consecutive sessions, he is considered dead and cannot participate in the society in any way.

Basic Groups

There are five basic groups in SIMSOC in which you can work. Only the head of these groups will be designated by the coordinator at the beginning. The rest of the players must find jobs. The head of each group receives the group income to dispense. The groups are listed below:

1) BASIN (Basic Industry) manufacturers words from anagrams (combination of letters in a jumbled order). These anagrams are purchased from the bank at $40., if they are returned completed, these anagrams are worth $60. These anagrams will vary in difficulty however 80% of the anagrams are solvable (an average of one in five anagrams will not be solvable). Up to five anagrams may be bought in one session. Money earned through anagram manufacturing is credited to the assets of Basin for the next consecutive session.

The initial assets of Basin is $100. and their income is 10% of their assets for that particular session. Anagrams have the following affect on two of the National Indicators (discussed later). The Standard of Living is raised for each completed word and the Food and Energy supply is lowered for each anagram purchased.

Objective: Expand its assets and income as much as possible.

2)POP (Party of the People).

Objective: To determine the major public policies followed by the society and to develop programs and mobilize supporters for this purpose. Basic income per session $40.

3) EMPIN (Employee Interests).

Objective: To see to it that the members of SIMSOC who are not heads of basic groups have adequate subsistence and a fair share of the wealth of the society. Basic income per session $40.

4) MASMED (Mass Media).

Objective: To keep the society informed about important events. This can be done through two media:

A) Verbal broadcasts, which may be delivered by the coordinator to which MASMED must pay $3., or MASMED may deliver the messages itself but the person delivering must have a travel ticket.

B) Written communications, for which MASMED must pay the bank $5. for each communication. Basic income per session $40.

5) JUDCO (Judicial Council)

Objective: To clarify and interpet the rules as honestly and conscientiously as they can.

JUDCO is the final arbiter on the meaning and interpretation of all rules. JUDCO must have at least two members besides its head. It may have more members but the total membership must be an odd number. JUDCO decisions must be signed by a simple majority of its members. Basic income per session $40.

Unemployment - Certain National Indicators are lowered if there are members of the society without jobs.

Death - Certain National Indicators are lowered if members die.

National Indicators - Numerical values for four National Indicators are calculated at the end of each session. The indicators are Food and Energy Supply, Standard of Living, Social Cohesion, and Public Commitment. These National Indicators may be raised by investing Simbucks in either public program - Research and Conservation or Welfare Services. The National Indicators decline by a certain percentage each session and can be lowered further by various actions and events in the society. If the National Indicators decline below certain points, the income available to the basic groups in the society declines. If the National Indicators rise above a certain point, the income available to the basic group in the society increases. If any National Indicator goes below zero, the society collapses and the game is over.

APPENDIX D

RATING GUIDELINES

Appendix D

RATING GUIDELINES
(INTERNAL)

1. Our/their misfortunes (deprivations) are due to our/their own faults.

2. If we band together we can get those guys in the Green Region (or the politically corrupt).

3. People get the success they deserve in this situation.

4. There is really no such thing as "luck".

5. Trusting the goodwill of others will not work as well as taking a definite course of action.

6. Any participant can influence the state of the game.

7. The society is surviving through our wise investments.

8. How well you are accepted depends upon how nice a person you are.

9. If you are unaccepted, it's because you don't know how to get along with others.

10. Leadership positions were assigned to me/us because of my/our ability.

11. Being successful is a matter of work, luck has little or nothing to do with it.

12. Capable people who fail to become leaders/successful have not taken advantage of their opportunities.

13. I am certain my plan will work.

RATING GUIDELINES
(EXTERNAL)

1. Those guys are just lucky.

2. The national indicators will decline despite our actions.

3. This game/experiment is unfair.

4. The organization is not prospering due to the faults of the group head.

5. We are prospering because the others do not play the game well.

6. I usually don't win in games so I probably won't do well here either.

7. Getting a good position depends mainly on being in the right place at the right time.

8. The consequence of the game is reliant upon forces we can neither understand, nor control.

9. We might as well decide what to do by flipping a coin.

10. The game is run by the people with power and there is little the rest of us can do about it.

11. It's hard to know why some people get leadership positions and others don't, ability doesn't seem to be the important factor.

12. Racial discrimination is evident even in this game.

13. We/they survived only because of outside help.

APPENDIX E

ANALYSIS OF SIMPLE EFFECTS

Appendix E

TABLE A1

SIMPLE EFFECTS OF RACE X POWER (RATINGS)

	df	MS	F
$A_1 B_1$ X $A_1 B_2$	1	.1697	2.339**
$A_2 B_1$ X $A_2 B_2$	1	.2280	3.0014*
$A_1 B_1$ X $B_2 B_1$	1	.1350	1.7771**
$A_1 B_2$ X $A_2 B_2$	1	.2722	3.5833*

*$p < .10$

**$p < .25$

TABLE A2

SIMPLE EFFECTS OF RACE X GAME (ROTTER)

	df	MS	F
$A_1 C_1$ X $A_1 C_2$	1	21.224	<1
$A_2 C_1$ X $A_2 C_2$	1	305.431	8.884*
$A_1 C_1$ X $A_2 C_1$	1	190.761	5.548**
$A_1 C_2$ X $A_2 C_2$	1	68.425	1.990***

*$p < .01$

**$p < .05$

***$p < .25$