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Two versions of a simulation game, Parent-Child, were taught to ten white and ten black inner-city males. The twenty subjects played a total of 198 rounds of the game, and the following conclusions were made with respect to the use of the Parent-Child game as a research site. (1) Inner-city fifth and sixth grade males can be taught to play Parent-Child. (2) The subjects play the game less effectively than a totally rational player would, but give some behavioral indication of understanding how one should play the game in order to win. (3) The subjects' behaviors are role and structure specific, which allows the simulation game to be used as a research site in a larger study of the effect of role and structural constraints on game behavior. (Author)

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THE CENTER FOR THE STUDY OF SOCIAL ORGANIZATION OF SCHOOLS

PILOT STUDIES OF ROLE BEHAVIORS IN A PARENT-CHILD SIMULATION GAME

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IN A PARENT-CHILD SIMULATION GAME

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But most of all, I would like to thank the subjects, particularly the subjects who participated in the research reported in Part I of this report. I hope they benefited as much from their participation in the research as I benefited from learning about them.

Introduction

This paper reports on an attempt to answer three questions about the use of a simulation game: (1) whether a particular simulation game, Parent-Child, can be played by poor, fifth-grade, inner-city children; (2) if it can be played, how these children play the game; (3) and most importantly, whether the game can be used to elicit role or structure-specific behaviors.

The answers to these questions are important for a proposed larger study of role behaviors, role perceptions, and the effect of structural changes in the game on role related behaviors. Before the larger study can be attempted, it must be determined if the particular simulation game can be played by the proposed subject population, and whether behaviors in the game are role specific and/or structure specific.

An existing simulation game, Parent-Child, was chosen as the research instrument because it seemed appropriate in the type of content and degree of complexity for the particular subject population. In addition, Parent-Child allows for the collection of directly observable data under fairly constant conditions. The advantages of this type of data, as opposed to attitudinal measures or self-reported behaviors, are greater reliability and greater predictive power.

Due to the lack of success in previous research involving simulation games (Stoll, 1968), one might expect difficulty in the use of a simulation game as a research site. However, as Coleman (1969) points out, most of this difficulty in providing concrete, verifiable results derives from the measurement of the wrong variables as criteria for success or learning.

In addition, most simulation games have been group administered, and a sizeable percentage have employed unmonitored scoring by the subjects themselves. These two factors, when combined with other known sources of error in the testing situation, can contribute to the lack of meaningful results. (For a more complete discussion of the use of simulation games as research instruments, see Coleman, 1968).

It is customary in papers of this type to provide a review of pertinent previous literature in order to locate the research at hand in the cumulative body of knowledge about a particular subject. Due to the nature of the present research, that is, a pilot study of instruments and techniques, this will not be attempted. It is noted that most previous research involving roles has tended to employ methods other than directly observed behaviors, and that role theory (if it exists at all) is less a theory and more a collection of propositions that are, at best, weakly related and lacking in empirical verification. (Biddle & Thomas, 1966, are among those holding this view.) Needless to say, there are exceptions to this blanket condemnation (Gross et al., 1957; Hernes, 1968), but the general state of research and theory with respect to role is as described above.

It is hoped that the larger study which will follow this present work will contribute to the theory of role behavior and to the study of the interaction between structural constraints and role behavior.

Before presenting the results of the two pilot studies, it is necessary to comment on the data presented in this report. No conclusions about the representativeness of the data should be made, particularly with respect to the data presented in Part II. The sample populations are probably not representative of the total population of poor, fifth-grade, inner-city

males, and the small number of cases further weakens conclusions drawn from the results.

However, the form of the data and the fact that role-specific behavioral data can be collected from a population of this type using the methods described in this paper are important. A conclusion that a subject of a particular type X is likely to perform a specific behavior Y should not be made on the basis of these results, but a conclusion that subjects behave differently in different roles or under different structural conditions is justified.

It should also be noted that the data gathering procedures presented in this report need not be limited to the particular simulation game, or even to simulation games in general. The methodologies and measures used in this research appear to be applicable to many types of social psychological and sociological analyses.

Part I

Method

An existing simulation game, Parent-Child, was chosen as the research instrument. This is a game which simulates the relationship between a parent and an adolescent child originally developed by Sarane S. Boocock and Erling Schild. The original version of the game was employed in the research reported on this section of the present report. (For a description of other research using the Parent-Child game, see Stoll, 1968.)

Parent-Child is a two person, non-zero-sum game with a cooperative solution. It is played by two subjects face-to-face, with one person taking the role of parent, and the other the role of child. Neither role is specified with respect to sex.

The structure of the game is as follows. There is a board listing five issues on which the parent and child have opposing attitudes. For example, on one issue, the parent wants the child to be home by 10 o'clock; the child wants to be able to stay out later. On each issue point cards are randomly distributed on each player's side, making the issues worth 2, 4, 6, 8, or 10 points, respectively. Due to this random allocation of points, the parent and child may have similar or different point values for each of the issues.

In the first stage of the game, which is called the agreement stage, the players attempt to elicit agreements that are favorable to their attitudes. If agreements are reached, an agreement marker is placed on the board indicating the particular issue and the person who has obtained the agreement. For example, the child could agree to be home by 10 o'clock. In this case the parent would place an agreement marker on the parent's side of the board on that particular issue.

In the second stage of the game, the parent is permitted to order the child to behave according to the parent's wishes on any of the issues not agreed upon. The parent does this by placing an order marker on the Parent's side of the board on the issue or issues on which he wishes to order. However, the parent is not required to order on any issue not previously agreed upon.

The third stage of the game is that in which the child behaves. The parent turns around, and the child puts a behavior marker down on each of the issues, either on his side of the board, or on the parent's side of the board. The child then covers the issues, and the parent turns around and faces the game board.

The fourth stage of the game is the allocation of points and punishment stage. The parent uncovers each of the issues in turn, and points are allocated according to whose side of the board the behavior markers are on. Thus the number of points the parent receives is totally dependent upon the actions of the child in placing the behavior markers.

The parent can influence the number of points the child receives by punishing the child for violations of agreements and orders. Thus, if a child agrees to behave one way, and places his behavior marker the other way, he can be punished. In like manner, if the parent orders the child to behave one way, and the child places his behavior marker the opposite way, the parent can punish him. In this particular version of the game, a violation of an order could be punished from zero to six points, and a violation of an agreement could be punished from zero to seven points, with the parent deciding on the degree of punishment. Note that in the special case in which the parent unilaterally orders the child to behave in accordance with the parent's wishes on all of the issues, and the child violates all of the orders, both players can receive zero points, provided the parent punishes the violations of the orders the maximum amount.

The optimal strategy for the players is to try to obtain favorable agreements on their highest point issues, give agreements on their low point issues, violate no (or very few) agreements as a child, order never (or very infrequently) as a parent, and not punish violations punitively as a parent.

As part of a linguistic research project described in an earlier publication (Garvey & McFarlane, 1968), a local social service agency was contacted to provide subjects for what was described as "educational

research." The agency was located in an area of extreme poverty: in 1960 the median family income was $2,404; the median educational level 7.4 years; and over 30% of the housing dilapidated (United States Department of Commerce, Bureau of the Census, 1961). The racial composition of the area was virtually 100% black.

The agency was requested to contact fifth-grade black males to act as subjects. It was stated that participation was to be voluntary and that anyone could leave at any time. The subjects were told that they would be paid 50¢ each time they came to the agency to participate in the studies.

All of the subjects were black males between the ages of 10 and 13. All went to public school, and all lived in private housing immediately adjacent to the social service agency. A subjective evaluation of the subjects tended to confirm the impression that all were from families whose incomes were well below the city average of $5,679.

In addition, all of the subjects were participants in the ongoing program at the agency. They would meet once a week with the director of the agency and would also perform various jobs in the neighborhood, such as cleaning vacant lots and running errands for older persons. For this work they were paid 50¢ per hour by the agency. Thus there is some selection process operating, and it is likely that the subject population is not truly representative of the total black male population between the ages of 10 and 13 in this neighborhood.

The original version of the Parent-Child game was taught to six subjects in the time period between March and April of 1968. In teaching the game, a conscious attempt was made to present the behavioral alter-

natives only and to make no suggestions with respect to strategies or norms for playing the game. The game sessions were held once a week in a private room at the agency. The number of subjects present at any one session varied from three to six. Each game session was tape recorded, and transcripts were made of the recordings.

After the subjects were taught the game, 4 to 10 rounds were played until everyone present who wished to play had played at least one game. At the conclusion of the sessions, which usually lasted 45 minutes or 1 hour, each subject who participated was paid 50¢.

During the play, the investigator noted the subjects' behaviors on a code sheet (see Appendix A) and monitored the play. Any questions about strategy were answered non-normatively, i.e., in such a way as to not reveal how the investigator felt the game should be played.

The original version of the game was played a total of 110 times by the six subjects, with the respective numbers of games per subject as follows.

TABLE 1

NUMBER OF GAMES PLAYED BY SUBJECT AND ROLE

Subject Number	Total	As Parent	As Child
02	13	6	7
04	27	13	14
07	22	13	9
05	21	10	11
08	17	8	9
09	10	5	5
	110	55	55

Results

This study was designed as an attempt to answer three questions about the Parent-Child game as a research instrument. The first question is whether or not this game can be played by poor, fifth grade, inner-city children.

On the basis of subjective impressions, it became obvious that these subjects could be taught to play the Parent-Child game, and in addition they seemed to enjoy playing the game. This is somewhat surprising, since this version of the game was originally designed for older children of higher socio-economic status. Furthermore, the game involves quite a bit of reading (at least until the issues are memorized). The children could comprehend the rules, and after two or three game sessions, most of the subjects were able to play the game without having to ask the investigator what to do.

The second and third questions to be answered are how the subjects behave in playing the game, and whether variation in roles and/or structures is associated with variations in behavior. As with all simulation games, Parent-Child is based on a model of how interaction between parents and children is thought to occur. In developing this simulation, Boocock and Schild made certain assumptions about interpersonal behavior, power relationships, and situations that obtain in the parent-child relationship. The behaviors of the game-players can be described according to their congruence with this model, and also the role or structure specificity of their behaviors can be ascertained. It is with these points that this section of the report is concerned.

For example, two totally rational players who understood the game perfectly would be expected to obtain an average of 2.5 agreements on their own side per round. The reasoning is that they would alternate obtaining agreement on the fifth issue, and split the agreements on the other four issues. As can be seen in Table 2, all the subjects obtain fewer than the expected number of favorable agreements per round overall, and only one subject attains the expected value in a particular role. Note also that the subjects differ in the number of favorable agreements they obtain according to the role they play, and that inter-role variation is positively associated with lower overall average number of favorable agreements.

TABLE 2

AVERAGE NUMBER OF AGREEMENTS ON OWN SIDE PER ROUND

Subject Number	Total	As Parent	As Child	Difference (Parent - Child)
04	1.85	1.92	1.71	.21
02	2.08	2.00	2.14	-.14
07	2.18	2.23	2.11	.12
05	2.00	1.90	2.09	-.19
08	2.06	2.50	1.67	.83
09	1.60	1.20	2.00	-.80
All Subjects	1.97	2.01	1.93	.08

The average number of orders given or received per round can be used as a measure of punitiveness for the parents, and/or lack of cooperation

for the children. The more orders a parent gives, the less rational his strategy, and the more orders a child elicits, the less rational his strategy. Table 3 presents the results on the number of orders given or received by the subjects per round.

TABLE 3

AVERAGE NUMBER OF ORDERS PER ROUND

Subject Number	Total	As Parent	As Child	Difference
04	1.19	0.92	1.43	-.51
02	1.00	1.17	0.86	.31
07	0.68	0.77	0.55	.22
05	1.14	1.30	1.00	.30
08	0.71	0.25	1.11	-.86
09	1.70	2.40	1.00	1.40
All Subjects	1.03	1.03	1.03	0.00

Again, the subjects display behaviors less rational than the optimum (i.e., no orders), although only one subject resorted to an average of more than two orders per round as parent. Again there was inter-role variation in the subjects' behaviors, with a greater magnitude of difference than in the case of the average number of favorable agreements per round.

Table 2 and Table 3 seem to indicate that the subjects could make an average of about four agreements per round but could not establish a means for the allocation of agreement on the fifth issue. Thus the subjects playing the parent role would usually order on the fifth issue.

The establishment of a means for determining who would obtain the agreement on the fifth issue is difficult even for adults, as it involves combining two rounds of the game so that there are ten issues to be agreed upon, and each player can have his way on five of them. This procedure necessarily involves a higher degree of trust than the five-issue situation. For these reasons it is not surprising that these particular subjects did not attain this level of rationality in their play.

Just as the number of orders per round can be used as a measure of punitiveness for parents and lack of cooperation for children, thus can the average number of points of punishment per round be so used.

TABLE 4

AVERAGE NUMBER OF POINTS OF PUNISHMENT PER ROUND

Subject Number	Total	As Parent	As Child	Difference (Parent - Child)
04	7.88	4.15	11.36	-7.21
02	6.84	9.33	4.71	4.62
07	4.14	6.62	0.56	5.06
05	2.57	1.90	3.18	-1.28
08	3.76	2.38	5.00	-2.62
09	7.70	11.40	4.00	7.40
All Subjects	5.40	5.40	5.40	0.00

As can be seen from Table 4, there is a wide range in the number of points the subjects punish as parents and receive in punishment as children. This information suggests there is an inverse relationship between

punitiveness and lack of cooperation in the same subject. This is not the same as saying there is a direct relationship between punitiveness and cooperation. Lack of cooperation in the game is not the opposite of cooperation; it is merely the absence of cooperation.

It could be that those subjects who are punitive while playing the parent role expect others who play the parent role against them to be equally punitive, and thus are more cooperative while playing the child role. In like manner the subjects who are not cooperative as children (and hence tend to receive more points of punishment) may be less punitive when playing the parent role because they can empathize with their non-cooperative children. (See Scheff, 1967, and Schelling 1963, for discussions of inter-related expectations and their consequences for interpersonal behavior.)

The average number of broken agreements and the average number of broken orders per round provide a measure of how well the subjects can control their child's behavior as parent, and how rebellious the subjects are as children. Tables 5 and 6 present these results.

TABLE 5

AVERAGE NUMBER OF BROKEN AGREEMENTS PER ROUND

Subject Number	Total	As Parent	As Child	Difference (Parent - Child)
04	0.63	0.46	0.79	-.33
02	0.62	0.50	0.71	-.21
07	0.59	1.00	0.00	1.00
05	0.14	0.30	0.00	.30
08	0.65	0.50	0.70	-.20
09	0.80	0.20	1.40	-1.20
All Subjects	0.54	0.54	0.54	0.00

TABLE 6

AVERAGE NUMBER OF BROKEN ORDERS PER ROUND

Subject Number	Total	As Parent	As Child	Difference (Parent - Child)
04	0.92	0.38	1.43	-1.05
02	0.62	1.17	0.14	1.03
07	0.45	0.62	0.22	.40
05	0.43	0.10	0.73	-.63
08	0.18	0.13	0.22	-.09
09	1.05	2.10	0.00	2.10
All Subjects	0.60	0.60	0.60	0.00

With respect to agreements, all subjects except one break an average of less than one agreement per round, and two subjects break no agreements at all as children. As the rational strategy is to break no agreements, the average subject's behavior is not totally rational, although the degree of agreement violation is not as large as is possible.

The fact that two subjects never violated agreements as children could indicate that these subjects understand the long-run negative relationship between agreement violation and number of points obtained. It is possible to gain points in one round by violating a particular agreement, but violation of agreements tends to decrease the probability of one's game partner making agreements in future rounds.

While it is possible for a subject to never violate an agreement as a child, it is more difficult for a subject to control the game situation to such an extent that no violations of agreements occur while he is playing the parent role. Most of the subjects elicit approximately 0.5 violations of agreements per round as parents, except for one subject who elicits an average of one agreement violation per round.

The average number of broken orders per round shows about the same pattern as the average number of broken agreements, i.e., inter-role variation and an overall mean of about 0.5 violations per round.

Since the object of the game is to obtain as many points as possible, the average number of points obtained per round can be used as a measure of how successful the subjects are at attaining this goal.

TABLE 7

AVERAGE NUMBER OF POINTS OBTAINED PER ROUND

Subject Number	Total	As Parent	As Child	Difference (Parent - Child)
04	14.07	14.92	13.29	1.63
02	11.92	10.33	13.29	-2.96
07	12.59	10.77	15.22	-4.45
05	15.95	17.00	15.00	2.00
08	12.65	14.00	11.44	2.56
09	10.10	7.20	13.60	-6.40
All Subjects	13.30	12.98	13.62	-0.64

Again assuming perfect rationality, each person would receive an average of 15 points per round, as there are 30 points possible for each player per round. As can be seen in Table 7, five of the six subjects obtain a total average number of points below 15, and one subject obtains an average number of points per round higher than 15. However, although the subjects do not in most cases obtain as many points as a perfectly rational player would, they do come fairly close to the expected average number of points per round.

With regard to inter-role variation, it appears that some subjects play the game better as children, and some play the game better as parents. For those who play better as parents the difference between the points they receive in the parent role and the points they receive in the child role is not as great as for those who play better as children. This is probably due to the fact that it is more difficult to control the behavior of another than to decide what to do for oneself in the game situation.

In the process of analyzing the data, it was felt that the average number of points obtained per round by each subject did not reflect completely the process operating in the play of the game. Due to the varying distributions of points, it is possible for situations to develop which encourage agreement, and situations which encourage non-agreement. An example of the latter situation is a distribution where the parent's points are opposite the same points of the child, i.e., the parent's 10 point issue is the child's 10 point issue. A situation favorable to agreement is where the parent's 10 point issue is the child's 2 point issue.

To control for these types of situations, a measure of efficiency in obtaining points was derived. This efficiency score is simply the sum of both players' points divided by the maximum number of points the dyad could receive per round. The range of the measure is thus from zero to one, with a score of zero being the worst possible score and a score of one being the best possible score.

As this score is a dyadic measure, as opposed to the individual measures employed previously, it is a better descriptor of the total game situation. Since the outcome of the game is a result of the interdependent interactions of the players, the efficiency score is a better summary measure than any individual measure.

TABLE 8

AVERAGE EFFICIENCY SCORE PER ROUND

Subject Number	Total	As Parents	As Child	Difference (Parent - Child)
04	0.63	0.72	0.54	.18
02	0.66	0.63	0.70	-.07
07	0.74	0.67	0.85	-.18
05	0.81	0.83	0.79	.04
08	0.76	0.81	0.72	.09
09	0.65	0.51	0.80	-.29
All Subjects	0.71	0.71	0.71	0.00

As can be seen from Table 8, the efficiency scores range between 0.6 and 0.8, and show inter-role variation. There seems to be a negative relationship between inter-role variation and total efficiency score. This could result from the subjects' not being able to differentiate between strategies or behaviors appropriate for one role or the other, or from their being unable for psychological or other reasons to play one role as effectively as the complementary role.

Summary and Conclusions

In summary, it appears that the following can be said about the use of the Parent-Child game as a research instrument.

1. Fifth-grade, inner-city black males can be taught to play the original version of the Parent-Child game.

2. These subjects do not play the game as perfectly rational players who understand the game perfectly would play, although the subjects' skill at playing the game, as measured in various ways, is fairly high when compared to the maximum performance possible.

3. On the basis of their behavior, some of the subjects indicate at least an implicit understanding of what constitutes a winning strategy. This is not to say these subjects could verbalize this strategy; in fact, all attempts to get them to state in words how one would win the game met with failure.

4. The subjects play the game differently in the role of parent than in the role of the child.

5. Because there is inter-role variation, the game can be employed in a more complete study of role performances, role perceptions, and the effect of structural constraints on role behavior.

Part II

Method

On the basis of results presented in Part I and on the basis of impressions formed while doing the research, it was felt that a revision of the issues of the game would facilitate the play of the game for the selected population. With the original version, the players evidenced some confusion on particular issues. For example, a player would confuse the issue involving staying out late with the issue involving going out on a date.

The game was consequently revised, with new issues being chosen that were based on topics and situations discussed in free conversation by the subjects who participated in the playing of the original game. (See Appendix B for a listing of the original and revised issues.) The revised issues proved to be less confusing, although they, too, caused some inter-issue confusion.

In addition to the changes in the issues, the scoring system was also revised. The point cards' values were changed from 2, 4, 6, 8 and 10 to 0, 5, 10, 15 and 20. This was done to see if the subjects would ever try to obtain an agreement on an issue worth 0 points to them, and also to provide a wider range of scores. Punishment points were also changed. A violation of an agreement could be punished from 0 to 10 points, and a violation of an order could be punished from 0 to the number of points received by breaking the order. The play of the game remained as in Part I.

Again, local social service agencies were contacted to provide subjects. A total of three inner-city agencies were contacted from

which a total of 14 subjects were obtained. Of the subjects, 4 were black and 10 were white. All were in the fifth or sixth grade, and all lived in private housing in the neighborhoods near the agencies.

However, the subjects who participated in playing the revised game were not connected previously with the centers who contacted them. In fact, one agency had forbidden all young males from using the center as a result of previous disciplinary difficulties. Thus the selection process was different than the process used in Part I.

The revised version of the Parent-Child game was taught to the 14 subjects in the time period between July and August of 1968. Game sessions were scheduled once a week at the local social service agencies, and each session was tape recorded and transcribed as before. At the end of each session, all those who attended were paid 50¢. The investigator monitored and coded the play as in Part I.

The revised version of the game was played a total of 88 times by these subjects, with the respective number of games and subjects as follows.

TABLE 9

DISTRIBUTION OF GAMES PLAYED BY AGENCY AND SUBJECT

Subject Number	Total	As Parent	As Child
	Agency 1 (Black)		
01	15	8	7
02	15	10	5
03	15	4	11
04	13	7	6
Total	58	29	29
	Agency 2 (White)		
01	6	3	3
02	6	3	3
03	2	1	1
04	2	1	1
Total	16	8	8
	Agency 3 (White)		
01	4	3	1
02	4	3	1
03	2	0	2
04	2	1	1
05	1	0	1
06	1	0	1
Total	14	7	7

Results

Due to the fact that several of the subjects played only a few games, it was felt that an analysis by individual subjects, as was performed in Part I, would be unprofitable. Therefore, it was decided to base an analysis on comparisons between two groups of players: a group of 4 black players who played a total of 58 games, and a group of 10 white players who played a total of 30 games. Note that this analysis is to test the usefulness of the instrument and methods for making group comparisons, and not to provide meaningful and/or representative cross-racial comparisons.

On the basis of subjective impressions formed while watching the subjects play the game, it appears that both groups could play the game, that is, comprehend the rules and perform the necessary actions without help from the investigator, after a few trials. Neither group was noticeably faster in comprehending the rules, and both groups seemed to enjoy playing the revised Parent-Child game.

In order to see how the groups differed in their play of the game and how both groups compare with purely rational players, the following tables were calculated. The rational model is the same as in Part I, although the issues and point values have been changed.

TABLE 10

AVERAGE NUMBER OF AGREEMENTS ON OWN SIDE PER ROUND

Group	Total	As Parent	As Child	Difference (Parent - Child)
Blacks	1.57	2.10	1.03	1.07
Whites	2.23	2.53	1.93	0.60

Applying the same reasoning to Table 10 as was applied to Table 2 in Part I, it appears that both groups are less than perfectly rational in their play. No group attains the average of 2.5 agreements on its own side per round which it would receive by purely rational play. However, whites playing the role of parent do attain this level of agreement. It also appears from Table 10 that white subjects may be more rational in their game play than black subjects with respect to the number agreements they obtain both as parent and as child. Black subjects also show more inter-role variation in the number of agreements they obtain on their side per round.

TABLE 11

AVERAGE NUMBER OF ORDERS PER ROUND

Group	Total	As Parent*	As Child*
Blacks	1.83	1.83	1.83
Whites	0.47	0.47	0.47

Table 12

AVERAGE NUMBER OF POINTS OF PUNISHMENT PER ROUND

Group	Total
Blacks	22.80
Whites	9.67

With respect to orders and points of punishment, the rational strategy is to order and punish not at all. In both cases, the black subjects are more likely to order or be ordered and to punish or be punished more strongly. If one compares the number of points of punishment per violation, rather than the average number of points of punishment per round, the black subjects average 8.84 points of punishment per violation (a broken order or agreement) and the white subjects average 8.06 points of punishment per violation.

The number of broken orders and broken agreements also is different for the two groups, as can be seen in the tables below.

*In Tables 12, 13, 14 and 16 the averages for the parent and child columns will be equal to the averages for the total columns, (since what the parent orders, the child receives, etc.) Therefore, in those tables the parent and child columns will be deleted.

TABLE 13

AVERAGE NUMBER OF BROKEN ORDERS PER ROUND

Group	Total
Blacks	1.34
Whites	0.47

TABLE 14

AVERAGE NUMBER OF BROKEN AGREEMENTS PER ROUND

Group	Total
Blacks	1.24
Whites	0.73

Again, the black subjects seem to be playing the less rational strategy, as they break more orders and more agreements per round than the white subjects. However, the black subjects break a lesser percentage of orders than the white subjects. In the present research, if a white subject was given an order, he would always break it; a black subject would break an order only 73% of the time.

With respect to the number of points obtained per round, the white group is more successful than the black group, as Table 15 shows.

TABLE 15

AVERAGE NUMBER OF POINTS RECEIVED PER ROUND

Group	Total	As Parent	As Child	Difference (Parent - Child)
Blacks	14.27	14.03	14.52	-.49
Whites	19.90	17.33	22.47	-5.14

The white subjects are better at obtaining points than the black subjects both as parent and as child. Note that the white subjects show a rather large variation in the number of points they receive according to the role they play, while the black subjects show almost no inter-role variation in the average number of points obtained per round.

The rational model would predict that each subject would receive an average of 25 points per round. The white subjects come close to this norm as children, but neither group obtains nearly the number of points possible per round.

As one would predict from the preceeding Tables 10 through 15, the efficiency scores for the two groups show that the white subjects play the game more efficiently, as Table 16 indicates.

TABLE 16

AVERAGE EFFICIENCY SCORE PER ROUND

Group	Total
Blacks	0.41
Whites	0.59

Thus it appears that neither group is very efficient in playing the revised version of Parent-Child, although the white subjects seem to be better than the black subjects in the efficiency with which they obtain points per round.

Summary and Conclusions

In summary, it appears the following can be said about the use of the revised version of the Parent-Child game as a research instrument.

1. The revised version of the Parent-Child game can be played by fifth-grade, inner-city white and black males.

2. The revision of the content of the issues seems to facilitate playing of the game for these particular subjects.

3. On all measures employed in the study, there were differences between the groups, with the white group approaching the rational model norms more closely than the black group.

4. There was inter-role variation in scores on some of the behavioral measures involved in the analysis of the game.

5. The fact stated in (4) above allows the revised version of the game to be used as a research site in a larger study of role performances, role perceptions, and the effect of structural constraints on role behavior.

General Discussion

The two studies reported on in this paper were primarily designed to answer three questions: whether a particular simulation game, Parent-Child, could be played (with modifications if necessary) by fifth-grade, inner city children; how they play the game; and whether the children's behaviors while playing the game would be role and/or structure specific. It was felt that if these questions could be answered affirmatively, then a more complete study of role behavior could be undertaken using the simulation game as the research site.

On the basis of the results presented in the present paper, it is felt that the answers to these questions is an unqualified yes, and plans for the larger study are now in progress.

The present study has necessarily postponed the investigation of at least two factors which are obviously very important in the description of game playing. The first is the effect of experience over time, or dynamic effects. Lack of control of the exposure of the subjects to the games and the small number of subjects precluded an examination of dynamic effects. The second factor is the effect of game partner, or dyadic effects. Again, the small number of cases per dyad prevented an analysis of this type.

Further research will attempt to deal with these factors, and to develop a more complete description of the interaction process occuring in the game. It is obvious from the present research that through the use of simulation games such as Parent-Child much more can be learned that is very important in the development and testing of sociological and social psychological theory.

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APPENDIX A

BEHAVIORAL SCORE SHEET

Parent_____ Round #_____

Issue #

	1 (10:00)	2 (Hair)	3 (Homework)	4 (Housework)	5 (Date)
Behavior					
Agree:	___	___	___	___	___
Order:	___	___	___	___	___
Behave:	___	___	___	___	___
Points:					
Potential:	___	___	___	___	___
Actual:	___	___	___	___	___

Total Points for Round _____

Child_____ Round #_____

Issue #

	1 (10:00)	2 (Hair)	3 (Homework)	4 (Housework)	5 (Date)
Behavior					
Agree:	___	___	___	___	___
Order:	___	___	___	___	___
Behave:	___	___	___	___	___
Points:					
Potential:	___	___	___	___	___
Actual:	___	___	___	___	___

Total Points for Round _____

APPENDIX B

ORIGINAL AND REVISED GAME ISSUES

Original Issues:

1. Parent: "Your child is going to a show this week and will be home by 10:00 o'clock."

   Child: "You are going to a show this week and will be home late."

2. Parent: "Your child will get his hair cut."

   Child: "You will let your hair grow."

3. Parent: "Your child will do all of his homework this week."

   Child: "You won't do much homework this week."

4. Parent: "Your child will spend most of this weekend helping around the house."

   Child: "You won't help much around the house this weekend."

5. Parent: "Your child will stay home this Saturday night."

   Child: "You will go out on a date this Saturday night."

Revised Issues:

1. Parent: "Your child will clean up the house this week."

   Child: "You don't have to clean up the house this week."

2. Parent: "Your child may not keep the lost dog he found as a pet."

   Child: "You may keep the lost dog you found as a pet."

3. Parent: "Your child must come straight home after school."

   Child: "You don't have to come straight home after school."

4. Parent: "Your child may not go on a trip with your church group."

   Child: "You may go on a trip with your church group."

5. Parent: "Your child will wear his hair the way you want him to."

   Child: "You may wear your hair the way you want to."