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ABSTRACT

Effects of the different components of the Distar language program were tested on 48 trainable mentally retarded (TMR) children. Three designs were used comparing IQ, sex, continuation status, selected standardized test results, and replicates. Results indicated that the degree of previous formal language training (continuation status) did not have any effect on current functioning. The Distar program produced steady, acceptable progress of the TMR children throughout the school year. In addition, the Distar program proved more effective when compared with the Peabody Language Development program received by 40 TMR children. (The report presents final, third-year data representing part of a series of studies on the most effective language training activities for TMR children. The major portion consists of statistical data. Results of the first 2 years' studies are reviewed. (IM)

TERMINATION REPORT

(TECHNICAL DATA)

LANGUAGE TRAINING FOR TMR CHILDREN; THIRD-YEAR RESULTS AND COMPARISON WITH FIRST TWO YEARS; THE PEABODY, DISTAR, AND ITPA PROGRAMS

by

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ABSTRACT

The report presents final, third-year data that represent a portion of the series of studies on the most effective language training activities for trainable mentally retarded children. The first-year, controlled study (Leiss & Proger, 1973, ERIC No: ED-082424) compared different intensities of ITPA-based training and found little effectiveness to any of the approaches. The second-year study examined in a very controlled fashion the relative effectiveness of the Peabody and Distar programs (Leiss & Proger, 1964, ERIC NO. ED-097-789) and found that significant differences occurred in the low-IQ portion of the TMR sample, and in particular in favor of the Distar program. This third year was primarily aimed at intensively examining the manner in which various categories of TMR children were affected by the different components of the Distar program; nonetheless, an incidental comparison between the Peabody and Distar was carried out to provide supplementary data to the second-year results. First, the Peabody-Distar comparison (2 X 2 X 2 X 2 X 5 design: treatments X sex X continuation status X measures X replicates) reinfcrced the second-year finding that the Distar program was more effective; however, this must be qualified by the fact that the Distar program in the third year was not randomly assigned but instead was given to children who had greater language facility, while the Peabody program was given to children with lease facility. Nonetheless, an examination of pretest levels revealed no significant differences that might give one hesitation in accepting the findings. Second, and on completely firm ground, was the intensive study of the Distar program itself. Three designs were used (2 X 2 X 2 X 2 X 4: IQ X sex X continuation status X measures X replicates; 2 X 2 X 2 X 4: IQ X sex X continuation status X replicates; 2 X 2 X 2 X 7 X 4: IQ X sex X continuation status X measures X replicates). Here,

degree of previous formal language training (continuation status) did not have any effect on current functioning; also, the Distar program produced steady, acceptable progress of the TMR children throughout the school year.

ACKNOWLEDGEMENTS

The investigators wish to thank those individuals who have made a substantive contribution in making this applied research report possible out of what, justifiably, had to remain a primarily service-oriented project. Ms. Jean Kern, Speech Clinician, checked over all coding of data in an extremely careful fashion and assisted in providing various types of background information on the children and the programing techniques. The therapists Diane Maurer, Ralph Sholly, Marilyn Stanford, Debi Heisel, John Busedu, contributed heavily not only to the actual rendering of services but also to the collection of data. Mrs. Judy Rizzo is responsible for the typing of the report, having to process innumerable computer printouts, and other tabulation and numerical tasks. Mrs. Marjorie Simons and her staff lent continual support from the Federal Projects Accounting Office. The investigators also thank the Pennsylvania State Department of Education: Dr. James Blair, Mr. John Resetar, and Mrs. Mae Everhart of the Title III Office; Dr. Gary Makuch, Dr. William Ohrtman, Mr. Robert Warkomski, Ms. Elaine Gilvear, and Mr. Carl Thornton of the Division of Special Education.

OBJECTIVES

Five objectives were posed for the third year of this project:

1. To effect language changes through the use of the Peabody Language Development Kit program with young nonverbal children.

2. To effect language changes through the use of the Peabody Language Development Kit program in a Distar format with trainable mentally retarded children who have attained word level.

3. To effect language changes through the use of the Distar program with trainable mentally retarded children who have attained at least the phrase level in verbal expression.

4. To involve the classroom teacher in the implementation of these programs

5. To attempt to generalize that an effective language stimulation program can be carried out by the classroom teacher.

PREVIOUS PROJECT EFFORTS

The present report contains the results of the 1974-1975 project activities. This was the third year of the project. The detailed findings of the first two years are contained in two separate reports (ERIC Documents Nos. ED-082-424 and ED-097-789). However, brief recapitulations will be given here.

During the first year, a language stimulation program based on the Illinois Test of Psycholinguistic Abilities was carried out by five speech clinicians. The children were randomly divided into three groups: 1) control group which received no training, 2) a group which received the program four times per week and 3) a group which received the program eight times per week.

The first year's results revealed that there were no significant differences among levels of intensity. In general, there appeared to be little improvement of the children. It appears that specific, prolonged language training based on the ITPA is ineffective despite the intensity of application.

In the second year of the project, the five speech clinicians carried out the Peabody Language Development Kit program and the Distar program. The children were randomly divided into the two groups which received the stimulation program four times per week.

During the second year, the results indicated that low IQ trainable mentally retarded children were aided more by Distar than by the Peabody program. The children who were in the program for the second year showed greater gains in the Distar program. It was also noted that the summer-lag phenomenon did occur. In considering the posttest from the first year and the pretest of the second year, a marked decrease in performance was observed.

TREATMENTS

During the third year of the project, each TMR child was assigned to one of three program offerings. The assignments were made not on a random basis, but instead upon the basis of what degree of language facility each child had. In this manner, the treatments were assigned in a rational, real-life fashion. It must be remembered that the primary goal was the appropriate education of the children, not basic research. However, in spite of what might be termed various types of self-selection biases at work (related to language facility, which might be termed a developmental/organismic variable, as opposed to sex, which would be the classical type of organismic variable), the reader will see later in the design itself that the final data actually analyzed arose from representative, randomly selected children.

The three treatments consisted of the Peabody Program (Level P), the Distar Program, or a combination of the two. Those children who were essentially non-verbal received the Peabody Level P offering. Those children who had some language facility (knowledge of some words and phrases) were given the combination of Peabody Level P and Distar. Finally, if a child could use at least short sentences, he was given the regular Distar program.

The third year was devoted to implementing the Peabody Language Development Kit program (Level P) with the young, non-verbal trainable mentally retarded children, using this same program with a more structured format as the children gain verbal ability at the word level. The Distar program will be used for those children who have attained phrase level or higher. In addition to these programs, specific lessons which were intended to facilitate and generalize verbal expression were also carried out. This continuum of language programs was implemented in a small group by the classroom teacher. During the third year, specific training was provided to each of the classroom teachers involved in the project. This training was carried out during the regular school year.

During the first year, a language stimulation program based on the Illinois test of Psycholinguistic Abilities was carried out by five speech clinicians. The children were randomly divided into three groups: 1) control group which received no training, 2) a group which received the program four times per week, and 3) a group which received the program eight times per week.

In the second year of the project, the five speech clinicians carried out the Peabody Language Development Kit program and the Distar program. The children were randomly divided into the two groups which received the stimulation program four times per week.

During the third year, the classroom teachers were trained to provide a modified Peabody program for the non-verbal children and the Distar program for the verbal children. Two clinicians presented the program one day per week and the classroom teacher three days per week.

STUDENTS

Students who were in the Intermediate Unit's TMR classes for the trainable mentally retarded were involved in this project. During the first and second years of the project, students were involved in varying ways with ITPA training, Peabody training, and Distar training. As with any large public school operation, the Intermediate Unit's TMR classes during the third year had some children who were continued from the first project year, some who had entered during the second year, and continued into the third year, and still others who were new entries for the third year itself. Further, not all children from the Intermediate Unit's classes were involved in any given year of the project in the activities in question for that year. Thus, over the three years of the project, one has several possibilities for a student's involvement. Table 1 summarizes the possibilities of a student's continuation status in third-year activities. The variable of continuation status becomes crucial in the actual design of this third-year study, as the reader will see later.

For reasons that should be clear to the reader, the investigators decided to eliminate any child with a continuation status of 2,3,4,or 5. Apart from the data arising from such continuation statuses being of doubtful "cleanliness," the numbers of children in these categories did not warrant further exploration. (See Table 2)

Before any purging of data occurred due to continuation status or missing data, there was a total population of 233 children. The distribution of children by IQ bands is given in Table 3.

Finally, another area of elimination from th formal concerns of this report were those children who received the combined Peabody/Distar programs (see Table 3 for one type of breakdown). Table 4 shows the nature of these children who, while of course given programing over the course of the year, were not involved in the formal comparisons (IQ was again split between 44 and 45).

For the Peabody-versus-Distar comparison, 5 students were randomly selected from each design cell (see Page 12) to yield a total of 40 children. For the Distar intensive analyses, 4 children were randomly selected from each design cell to yield a total of 48 children.

TABLE 1

CONTINUATION STATUS LEVELS

LEVEL	DESCRIPTION
C.S. 1	1974-1975 (1 year of contact)
C.S. 2	case study control group (3 years of contact)
C.S. 3	controls in 1972-1973, then regular program in 1973-1974, and also 1974-1975 (2 years of contact)
C.S. 4	in year 1, out year 2, in year 3 (2 years of contact)
C.S. 5	in all 3 years, but case study in year 1 (3 years of contact)
C.S. 6.	in year 2 (1973-1974) and year 3 (1974-1975) (2 years of contact)
C.S. 7	in all 3 years (3 years of contact)

TABLE 2

DISTAR READING PROGRAM: OMITTED DATA

FREQUENCY DISTRIBUTION

Continuation Status	BOYS		GIRLS	
	High-IQ	Low-IQ	High-IQ	Low-IQ
C.S. 2		2		
C.S. 3	7	6	7	4
C.S. 4	1	1	1	
C.S. 5		1		2

TABLE 3

TOTAL STUDENT POPULATION DISTRIBUTION

Age	C.S. 2 Level P B	C.S. 2 Level P G	C.S. 2 Distar B	C.S. 2 Distar G	C.S. 2 Partially/Distar B	C.S. 2 Partially/Distar G	C.S. 6 Partially Level P B	C.S. 6 Partially Level P G	C.S. 6 Distar B	C.S. 6 Distar G	C.S. 6 Partially/Distar B	C.S. 6 Partially/Distar G	C.S. 7 Partially Level P B	C.S. 7 Partially Level P G	C.S. 7 Distar B	C.S. 7 Distar G	C.S. 7 Partially/Distar B	C.S. 7 Partially/Distar G	[illegible] Partially Level P B	[illegible] Partially Level P G	[illegible] Distar B	[illegible] Distar G	[illegible] B	[illegible] G
66-70			1																2					
61-65			1	1																				
56-60		1		1					4							1						1		
51-55			2	1			1		1	2					5						2	2		
46-50			5	3				1	10	6		1			10	8					6	4		
41-45	2		1	2			1	4	6	4					10	12					4	3	1	
36-40		1	1	2					2	6					6	4	1				5	4		
31-35	2		3		2		4	1	4	11	1				6	3							1	
26-30	1	2	3				3	1	3	2	1				2	2								
21-25		1					3		3						1						1			
below 21							2			1														

Proger

TABLE 4

PEABODY/DISTAR HYBRID PROGRAM

FREQUENCY DISTRIBUTION

Continuation Status	BOYS		GIRLS	
	High-IQ	Low-IQ	High-IQ	Low-IQ
C.S. 1		2		
C.S. 2		2		
C.S. 6		2	1	
C.S. 7		1		

INSTRUMENTS

A variety of measurement approaches were used in this study to tap as many different language-related skills as possible. A series of standardized and/or commonly used devices were employed. Also, a type of criterion-referenced measurement (CRM) was embodied in the intensive study of the Distar program.

With regard to standard measurement technology, several approaches were used. First, selected subtests of the Illinois Test of Psycholinguistic Abilities (ITPA: Revised) were given to all children. In particular, the Auditory Association, Visual Association, Verbal Expression, and Grammatic Closure subtests were selected (scaled scores only). Second, the Peabody Picture Vocabulary Test (Form B) was given (mental age). Third, the Spencer Memory for Sentences Test was used. Apart from these rountinely used devices, the Distar Reading Program Placement Test was also given to all children. The Placement Test is divided into Parts A, B, C, D, and E; in addition, a Total score is also yielded.

The second major phase of this study concerned only the Distar program itself. It was felt that an intensive investigation of the Distar program would reveal interesting facts about how language develops in TMR children subjected to a highly structured, commercially available program. The school year was divided into seven periods. At the end of each period, the lesson number in the books which the children were currently using was recorded and used as the data input. For each period, there were five possibilities: Book A, Book B, Book C, Story Book, and Coloring Book. Various schemes of reporting in-process Distar progress were explored prior to settling upon this final choice, but enormous problems arose in selecting a uniform, meaningful method of scaling. The lesson numbers seemed to be the most interpretable system of recording progress. In this sense, the data system is akin to a criterion-referenced measurement (CRM) system in which only absolute levels of performance are reported with no relative comparisons being made.

Finally, the Distar Placement Test needs some further elaboration. The Test (located in Book A, Part I, of Distar Language I: An Instructional System, by S. Engelmann, J. Osborn, and T. Engelmann, Chicago: Science Research Associates, 1972) consists of Segments A through E. Segemnt A contains 5 tasks, each of which deals with "Action and Identity Statements." For instance, a child would be asked to point to an animal and then asked what the animal was doing. The respective number of items for each Task is as follows: Task 1, 2; Task 2, 2: Task 3, 5; Task 4, 2; Task 5, a. Segment B deals with "Can/Is . Action Statements." The child merely has to answer "yes" or "no" to such items. There are 6 such items. Segment C deals with "Polars," For instance, the child is asked whether something is long or short and merely has to answer "yes" or "no". There are 5 such items. Segment D deals with "Polars" also, but at a higher conceptual level. The child is shown a big object, for instance, but then is asked to tell about the opposite concept, a similar object. There are 4 items. Segment E deals with "Prepositions." There are 7 items.

DESIGN

The two basic sets of analyses in the third year of this project deal with the Peabody versus Distar comparisons and with the Distar intensive comparisons.

For the Peabody versus Distar phase, there were five factors: treatments (T), sex (S), continuation status (C), measures (M), and replicates (R). Replicates was taken as a random factor, while the other four factors were interpreted as fixed. To achieve equal cell frequencies in this design, five children were randomly sampled from each design cell. Thus, while treatments were not originally assigned in a random way (but rather in the real-life manner of what treatment would be most appropriate with a given child), the final design involved random sampling of children. Replicates were nested under the factors of treatments, sex, and continuation status. With the exception of replicates (which had five levels), all factors had two levels. While the factor of IQ might have been included, the design already was "saturated" with factors that did not allow any further stratifying of subjects if a reasonable number of children were to be kept in each cell. In terms of any differential bias that might exist in favor of a treatment, the pre-level of the test in question, as well as the previous experience of the children as indicated by continuation status, were deemed more crucial factors than IQ itself.

For the Distar intensive phase, three different sets of results were generated: (a) pretest-posttest results on the same criteria as in the Peabody versus Distar phase, but this time replacing treatments by IQ to obtain additional information on the Distar Program itself; (b) intra-year findings for each of the 7 periods (separately) of the school year that the project used for CRM data recording; and (c) intra-year data across all periods. In these regards, all three sets of intensive Distar analyses were loosely looked upon as "longitudinal" in nature. For (a), five factors were embodied: sex, IQ, continuation status, replicates, and measures. IQ was determined on an approximate, median-split basis, which in this study happened to be between 44 and 45; thus, the factor of IQ was random rather than fixed (that is,

it was empirically determined rather than logically/arbitrarily predetermined). Replicates was also taken at random. Sex, continuation status, and measures were all interpreted as fixed. All factors had two levels, with the exception of continuation status, which had three (E.S.1, C.S.6, and C.S.7), and replicates, which had 4 levels (4 randomly selected children from each categorical cell). For (b), measures as a factor was omitted. For (c), the few criteria that had complete data across all seven periods of the year employed the same kind of, and number of levels of, factors as in design (a) with the exception of measures, which now had seven levels.

From the above "Design" discussion, the reader should be able to visualize the nature of the three different designs used in this study: (a) Peabody versus Distar, (b) Distar Intensive Analyses (Single Criteria), and (c) Distar Intensive Analyses (Multiple Criteria). For design (a), the reader can easily see how it evolved from the C. S. 1 and C.S. 6 panels of Table 3 in the section on "Students."; for any other C.S. statuses, children had not been assigned to the Peabody Level P program. Table 5 further halps the reader to focus in on how the Peabody portion of design (a) was built. The reader can see the structure (prior to random sampling) for designs (b) and (c) in Table 6.

In all analyses, the BMDO8V program of the UCLA Viomedical series was used. The analyses were run on a CDC 6400 computer at Lehigh University, Bethlehem, Pennsylvania.

So that the reader understand in what manner the statistical tests of significance were carried out, it is necessary to describe briefly the error terms. In this discussion, several abbreviations will be used: T (treatments), S (sex), C (continuation status), M (Measures), and R (replicates) For design (a), the Peabody versus Distar phase of the study, the variance source to be tested for significance and its appropriate error term, are given respectively in pairs as follows: Mean, R (TSC); T, R (TSC); S, R (TSC); C, R (TSC); M, RM (TSC); TS, R(TSC); TC, R(TSC); SC, R(TSC); TM, RM (TSC); SM, RM (TSC) CM, RM (TSC) $\overline{\text{TSC}}$, R(TSC); TSM, RM (TSC); TCM, RM (TSC); TSCM, RM (TSC); and RM (TSC), not tested:

For design (b), the Distar intensive analyses of single criteria, the variance source to be tested for significance and its appropriate error term, are given respectively in pairs as follows (Q denotes IQ) Mean, Q; S, SQ; Q, R(SQC); C, QC; SQ, R(SQC); SC, SQC; QC, R(SQC)1 SQC, R (SQC); and R(SQC), not tested.

For design (c), the Distar intensive analyses of multiple criteria, the variance source to be tested for significance and its appropriate error term, are given respectively in pairs as follows: Mean, Q; S, SQ; Q, R(SQC); C, QC; M, QM; SQ, RM(SQC); CM, QCM; SQC, R(SQC); SQM, RM(SQC); SCM, SQCM; QCM, RM(SQC); R(SQC), not tested; SQCM, RM(SWC); and RM(SWC), not tested.

TABLE 5

PEABODY LEVEL P PROGRAM
FREQUENCY DISTRIBUTION

Continuation Status	BOYS	GIRLS
C.S. 1	5	5
C.S. 6	11	7

TABLE 6

DISTAR INTENSIVE STUDY

FREQUENCY DISTRIBUTION

Continuation Status	BOYS		GIRLS	
	High-IQ	Low-IQ	High-IQ	Low-IQ
C.S. 1	10	7	6	4
C.S. 6	14	19	9	23
C.S. 7	16	23	20	20

RESULTS

Peabody Versus Distar: Appendix A contains the appropriate Tables (7 to 30) for these comparisons. When one examines Tables 7 through 30, he needs to be aware of coding used in the cell means tables. For treatments, "1" denotes Peabody and "2" denotes Distar. For sex, "1" denotes boys and "2" denotes girls. For continuation status, "1" denotes C.S.1 and "2" denotes C.S. 6. For measures, "1" denotes pre and "2" denotes post. For IQ, "1" denotes low (44 and below) and "2" denotes high (45 and above).

Later in this report, under "discussion," the reader will be cautioned on the restrictions that pertain to this design. In brief, these constraints involve the self-selection bias built into the study by default, with the more language-advanced students receiving the Distar program. If there is a significant bias at work that contaminates treatment comparisons in any noticeable way, then this should be easily detectable by examining the interactions between treatments and measures; in particular, the pretest levels pitted against treatments should show the obvious differential biases at work. Out of a total of 12 analyses of Peabody-versus-Distar type, only two showed a significant treatments-by-measures interaction. These two results involved the criteria of Parts D and E of the Distar Placement Test. On all other criteria (Distar Placement Test: Total Score and Parts A through C; ITPA: Grammatic Closure, Auditory Association, Verbal Expression, and Visual Association; Spencer Memory for Sentences Test; and Peabody Picture Vocabulary Test) the treatments-by-measures interactions were insignificant. Because of this situation, the investigators decided to simply omit any discussion of the contaminated Parts D and E of the Distar Placement Test and to proceed very cautiously with the results of the remaining criteria.

Of primary interest to this study was the main effect of treatments. Of the 10 "uncontaminated criteria," the treatment main effect was significant in all cases except on ITPA Grammatic Closure and ITPA Visual Association. Of the 8 significant treatment effects, the Distar Program was clearly superior to the Peabody Program on

all of the criteria except ITPA Auditory Association, on which the opposite finding occurred.

With regard to the other variables in the design, little was found except for measures. Sex yielded no differences in language activity except on ITPA Visual Association, on which boys were superior to girls. No difference at all was found among the 10 uncontaminated criteria for the variable of continuation status; apparently the previous, formal language experiences of the children had little effect. The variable of measures yielded significant main effects on each of the 10 criteria except on the Spencer Memory for Sentence Test. Thus gains uniformly occurred, regardless of treatments.

With regard to interactions on the 10 uncontaminated criteria, the only significant two-way result was for sex by continuation status on ITPA Visual Association; in particular, for C.S.6, girls performed significantly higher than boys, while for C.S.1 no difference occurred.

Fortunately, triple interactions were kept to a minimum on the 10 criteria of "uncontaminated" type. Thus, discussion of results is greatly simplified. The only exceptions were treatments by continuation status by measures on ITPA Verbal Expression, treatments by sex by continuation status on ITPA Visual Association, treatments by sex by measures on Distar Placement Test (Part A), and treatments by continuation status by measures on Distar Placement Test (Part C).

Distar Intensive Analyses (Pretest-Posttest Findings): Appendix B contains the results for this phase of the study (Tables 31 to 54). Basically, this series of analyses was the logical continuation of those presented in Appendix A and changed only in the sense of replacing the treatments factor with the IQ factor. The purpose of these analyses was to examine more intensively any trends that might be at work within the Distar Program itself (which was the main focus of interest of this third year of the project).

As with the Distar/Peabody analyses above, the pretest-posttest analyses again had 12 criteria. In no case did any sex differences arise, with the exception of a complex triple interaction among sex, IQ, and measures. On all but 4 of the criteria, IQ operated effectively in the expected direction to control some of the variation (the exceptions were ITPA Grammatic Closure, ITPA Auditory Association, ITPA Verbal Expression, and ITPA Visual Association). The latter finding again raises some validity problems on the ITPA, since an IQ difference would be expected on virtually all criteria. Continuation status produced no difference at all on any of the 12 criteria. Measures (pretest and posttest) was significant on only one criterion: Distar Placement Test (Part E).

Apart from the main effects, the only other results that might be taken note of were an IQ-by-measures interaction on four of the 12 criteria (Distar Placement Test: Total Score, Part A, and Part C; ITPA Visual Association). Two triple interactions (sex by continuation status by measures, and sex by IQ by measures) were also significant but are too complex to go into for brief summary purposes here.

Distar Intensive Analyses (Intra-Year Findings Separately for Each of 7 Periods): Appendix C contains the results for this phase of the study (Tables 55 to 98). This series of analyses looked at the CRM data that was yielded in day-to-day contacts with the program. The lesson numbers of Distar Book A, Distar Book B, Distar Book C, Distar Story Book, and Distar Coloring Book, were monitored for each child in the Distar Program at the end of each of 7 evenly spaced time periods throughout the school year. During certain periods one will notice that not all 5 possible lesson numbers were involved in the analyses (e.g., Period 1 has only Book A and Book B); this situation is merely a reflection of the fact that developmentally, the children did not begin using certain of the more advanced components (Book C, Story Book, and Coloring Book) until greater facility in language skills had been achieved at the lower levels (Books A and B).

There were a total of 22 CRM measures (as discussed earlier in the "Instruments" section) processed during this portion of the Distar Intensive Study. Of the three factors in the design (sex, IQ, and continuation status), only IQ resulted in any noticeable pattern of significant differences. Of the 22 CRM measures, only 6 did not yield a significant IQ difference (specifically, Distar Book A, Period 1; Distar Book B, Period 1; Distar Book C, Period 4; Distar Story Book, Period 5; Distar Book C, Period 6; Distar Story Book, Period 6; and Distar Book C, Period 7). There appears to be no real pattern to these nonsignificant differences, and little more need be said here.

The variables of sex and continuation status were consistent in that neither produced any significant differences. Inspection of the cell means tables in Appendix C shows why this situation arose.

Distar Intensive Analyses (Intra-Year Findings Across All 7 Periods): Appendix D (Tables 99 to 102) contain the results for this part of the study. Basically, the purpose was to look at those CRM Distar measures that provided data across all 7 periods of the school year. Only Books A and B yielded such data; this situation was a partial reflection of the developmental problems of the children and the resultant times at which they started Distar Books A,B, or C; or the Story Book, or the Coloring Book.

As one can see from the tables, sex and continuation status were insignificant on both Book A and Book B. The factor of IQ worked effectively to isolate some of the error variance; the significant difference was in the expected direction on both measures. The factor of measures resulted in significant progress being steadily shown throughout the school; in Book A, the lesson numbers ranged from 33.12 in Period 1 to 77.3 in Period 7, while in Book B, the range was from 31.42 in Book A to 77.23 in Period 7. The only other significant result was the IQ-by-measures interaction on both criteria; no other interactions were significant on either criterion.

DISCUSSION

The results appear at first glance to be straightforward: the Distar program seems to produce more consistent benefits for TMR children. If one looks merely at the design and results, this is indeed the case. However, the real-life assignment of treatments placed a constraint upon the design that must be kept in perspective: the Distar program was given to children who had the most language facility, while the Peabody program was assigned to those children with the least language facility. Thus, if one looks at only the treatment factor alone without any other qualifications, the superiority of the Distar program is a distorted finding. However, if one begins to control the relative entry-level advantage that the Distar children had over the Peabody children, then a fairer comparrison arises. In particular, the factor of Measures allows one to qualify the findings fairly. First, one is interested in the extent to which the Distar children had an unfair "head start" over the Peabody children on the tests being used; the interaction of treatments-by-measures provides this information when one looks at the pre levels in the simple effects of the interaction. Second, if the pre-levels are not noticeably different, then the full gains themselves in that interaction can be looked upon in a more-or-less uncontaminated manner. One can see from the "Results" section above that with rare exceptions, this was not the case. This fact notwithstanding, the investigators still wish the reader to bear in mind that the Distar superiority should probably be considered more safely in the sense of being a reflection of the self-selecting diagnostic differences (i.e., the Distar children were diagnostically considered to be more facile with language than the Peabody children).

It should also be noted here that while the Peabody-versus-Distar comparisons of the third year should be treated cautiously due to the self-selection bias, the second year of this project did in fact embody a very "clean" comparison between the Peabody and the Distar programs (See R.H. Leiss & B.B. Proger, Language training for trainable mentally retarded; Annual project report; second year (Project No. 7202H);

available from ERIC as Document No. ED-097-789, 1974). In that second-year study, the low-IQ children were the ones who particularly were aided more by the Distar program than by the Peabody program. Thus, the results of the third-year study are reinforced by this fact alone, apart from trying to account for differential pretest levels by means of treatment-by-measures interactions of any order.

The Distar Intensive Study of this report was felt to be a safer type of data to analyze, in the sense that there were no distorted comparisons. The investigators think it highly interesting that continuation status had no effect at all. In other words, previous degree of formal language contact apparently in TMR children does not affect Distar language performance at all. In terms of the measures factor, the

Distar program does appear to produce a respectable degree of progress during a school year.

Finally, one always has to consider the nature of the criteria used in a study. The ITPA, often used as a reflection of language development, does not appear to do so in the case of TMR children. The use of Distar lesson numbers for the Intensive Study part of this investigation appears to be a fairly sound CRM meanner of interpreting data.

APPENDIX A

TABLES 7 TO 33 FOR

PEABODY VERSUS DISTAR COMPARISONS

TABLE 7

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: TOTAL SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	180.7035	17582.45	1	17892.45	.01
T (Treatment)	87.2271	8487.200	1	8487.200	.01
S (Sex)	.1156	11.25000	1	11.25000	N.S.
C (Cont. Status)	.2055	20.00000	1	20.00000	N.S.
M (Measures)	38.0590	500.0000	1	500.0000	.01
TS	.0082	.8000000	1	.8000000	N.S.
TC	1.4435	140.4500	1	140.4500	N.S.
SC	1.6115	156.8000	1	156.8000	N.S.
TM	1.6784	22.05000	1	22.05000	N.S.
SM	.9743	12.80000	1	12.80000	N.S.
CM	.0951	1.250000	1	1.250000	N.S.
TSC	.2718	26.45000	1	26.45000	N.S.
TSM	.3083	4.050000	1	4.050000	N.S.
TCM	3.8972	51.20000	1	51.20000	N.S.
SCM	.4605	6.050000	1	6.050000	N.S.
TSCM	.2436	3113.600	32	97.30000	- -
(TSC)		3.200000	1	3.200000	N.S.
		420.4000	32	13.13750	- -

TABLE 8

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: TOTAL SCORE

CELL MEANS

T =	1	4.52500	2	25.12500		
S =	1	14.45000	2	15.20000		
C =	1	15.32500	2	14.32500		
M =	1	12.32500	2	17.32500		
S =	1	4.25000	2	4.80000		
T = 1	C = 1	24.55000	C = 2	25.60000		
T = 2	C = 1	3.70000	C = 2	5.35000		
S = 1	C = 1	26.35000	C = 2	23.30000		
S = 2	C = 1	13.55000	C = 2	15.35000		
T = 1	C = 1	17.10000	C = 2	13.30000		
S = 1	C = 1	2.60000	C = 2	5.90000		
S = 2	C = 1	4.90000	C = 2	4.80000		
T = 2	C = 1	24.50000	C = 2	24.80000		
S = 1	C = 1	29.40000	C = 2	21.80000		
T = 1 S = 1	R = 1	.00000	2	2.00000	3	4.50000	4	2.00000	5	4.50000
C = 1	C = 2	5.00000		12.50000		3.50000		8.50000		.00000
T = 1 S = 2	R = 1	.00000	2	14.50000	3	6.50000	4	2.00000	5	1.00000
C = 1	C = 2	12.00000		7.50000		3.50000		.00000		1.00000
T = 2 S = 1	R = 1	34.50000	2	22.50000	3	9.50000	4	28.50000	5	27.50000
C = 1	C = 2	15.00000		31.00000		11.00000		35.00000		32.00000
T = 2 S = 2	R = 1	26.50000	2	35.00000	3	23.50000	4	29.00000	5	28.00000
C = 1	C = 2	8.50000		24.00000		29.00000		17.00000		30.50000

Proger

TABLE 9

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART A

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	AP LEVEL
MEAN	205.0169	3175.200	1	3175.200	.01
T (Treatment)	82.6473	1280.000	1	1280.000	.01
S (Sex)	.8265	12.80000	1	12.80000	N.S.
C (Cont. Status)	.2615	4.050000	1	4.050000	N.S.
M (Measures)	26.2295	80.00000	1	80.00000	.01
TS	.8265	12.80000	1	12.80000	N.S.
TC	.7264	11.25000	1	11.25000	N.S.
SC	.3906	6.050000	1	6.050000	N.S.
TM	.0656	.2000000	1	.2000000	N.S.
SM	1.6393	5.000000	1	5.000000	N.S.
CM	.4098	1.250000	1	1.250000	N.S.
TSC	.0807	1.250000	1	1.250000	N.S.
TSM	4.1967	12.80000	1	12.80000	.05
TCM	.4098	1.250000	1	1.250000	N.S.
SCM	.1475	.4500000	1	.4500000	N.S.
R (TSC)		495.6000	32	15.48750	--
TSCM	.1475	.4500000	1	.4500000	N.S.
TM (TSC)		97.60000	32	3.050000	

TABLE 10

PEABODY VALUES DISTAR

DISTAR PLACEMENT: PART A

CELL MEANS

T =	1						
		1	2				
		2.30000	10.30000				
S =	1						
		1	2				
		5.90000	6.70000				
C =	1						
		1	2				
		6.52500	6.07500				
M =	1						
		1	2				
		5.30000	7.30000				
S =	1						
		1	2				
T = 1		2.30000	2.30000				
C =	2						
		1	2				
		9.50000	11.10000				
T =	1						
		1	2				
		2.15000	2.45000				
C =	2						
		1	2				
		10.90000	9.70000				
S =	1						
		1	2				
		5.85000	5.95000				
T =	2						
		2	2				
		7.20000	6.20000				
C =	1						
		1	2				
S =	1	2.00000	2.60000				
	2	2.30000	2.30000				
T =	2						
		1	2				
C =	1						
		1	2				
S =	1	9.70000	9.30000				
	2	12.10000	10.10000				
T = 1		S = 1					
		1	2	3	4	5	
R =	1						
C =	1	.00000	2.00000	3.00000	2.00000	3.00000	
	2	3.50000	4.50000	2.00000	3.00000	.00000	
T =	1	S = 2					
		1	2	3	4	5	
R =	1						
C =	1	.00000	8.00000	4.50000	2.00000	1.00000	
	2	6.00000	2.50000	2.00000	.00000	1.00000	
T =	2	S = 1					
		1	2	3	4	5	
R =	1						
C =	1	13.00000	11.50000	5.00000	10.00000	9.00000	
	2	3.00000	11.50000	6.50000	13.00000	12.50000	
T =	2	S = 2					
		1	2	3	4	5	
R =	1						
C =	1	11.50000	13.00000	13.00000	12.50000	10.50000	
	2	4.50000	9.50000	13.00000	10.50000	13.00000	

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART B

ANALYSIS OF VARIANCE

SOURCE	F	S	DF	M	Signif.
MEAN	182.3461	744.2000	1	744.2000	.01
T (Treatment)	67.0873	273.8000	1	273.8000	.01
S (Sex)	.1103	.4500000	1	.4500000	N.S.
C (Cont. Status)	.1103	.4500000	1	.4500000	N.S.
M (Measures)	20.0569	26.45000	1	26.45000	.01
TS	.1103	.4500000	1	.4500000	N.S.
TC	2.7565	11.25000	1	11.25000	N.S.
SC	2.4012	9.800000	1	9.800000	N.S.
TM	.3079	.5000000E-01	1	.5000000E-01	N.S.
SM	1.3649	1.800000	1	1.800000	N.S.
CM	3.7915	5.000000	1	5.000000	N.S.
TSC	.0000	-.7389644E-12	1	-.7389644E-12	N.S.
TSM	1.3649	1.800000	1	1.800000	N.S.
TCM	2.4265	3.200000	1	3.200000	N.S.
SCM	.3412	.4500000	1	.4500000	N.S.
R (TSC)		130.6000	32	4.081250	- -
TSCM	.0379	.5000000E-01	1	.5000000E-01	N.S.
TM (TSC)		42.20000	32	1.318750	

TABLE 12

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART B

CELL MEANS

T =		1	2				
		1.20000	4.90000				
S =		1	2				
		3.12500	2.97500				
C =		1	2				
		2.97500	3.12500				
M =		1	2				
		2.47500	3.62500				
S =		1	2				
T =	1	1.20000	1.20000				
	2	5.05000	4.75000				
C =		1	2				
T =	1	.75000	1.65000				
	2	5.20000	4.60000				
C =		1	2				
S =	1	2.70000	3.55000				
	2	3.25000	2.70000				
T =	1						
C =		1	2				
S =	1	.40000	2.00000				
	2	1.10000	1.30000				
T =	2						
C =		1	2				
S =	1	5.00000	5.10000				
	2	5.40000	4.10000				
T =	1	S = 1					
R =		1	2	3	4	5	
C =	1	.00000	.00000	1.50000	.00000	.50000	
	2	1.00000	4.50000	1.50000	.00000	.00000	
T =	1	S = 2					
R =		1	2	3	4	5	
C =	1	.00000	2.50000	3.00000	.00000	.00000	
	2	3.00000	2.00000	1.50000	.00000	.00000	
T =	2	S = 1					
R =		1	2	3	4	5	
C =	1	6.00000	5.00000	2.00000	6.00000	6.00000	
	2	6.00000	5.50000	2.50000	6.00000	5.50000	
T =	2	S = 2					
R =		1	2	3	4	5	
C =	1	4.50000	6.00000	5.00000	5.50000	6.00000	
	2	5.50000	5.50000	4.50000	2.00000	6.00000	

TABLE 13

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART C

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	151.8835	505.0125	1	505.0125	.01
T (Treatment)	62.5602	208.0125	1	208.0125	.01
S (Sex)	.1842	.6125000	1	.6125000	N.S.
C (Cont. Status)	.4549	1.512500	1	1.512500	N.S.
M (Measures)	8.4949	10.51250	1	10.51250	.01
TS	.0940	.3125000	1	.3125000	N.S.
TC	.6353	2.112500	1	2.112500	N.S.
SC	1.3571	4.512500	1	4.512500	N.S.
TM	.2525	.3125000	1	.3125000	N.S.
SM	1.7071	2.112500	1	2.112500	N.S.
CM	.0101	.1250000E-01	1	.1250000E-01	N.S.
TSC	.0038	.1250000E-01	1	.1250000E-01	N.S.
TSM	.0101	.1250000E-01	1	.1250000E-01	N.S.
TCM	6.3131	7.812500	1	7.812500	.05
SCM	.0101	.1250000E-01	1	.1250000E-01	N.S.
R (TSC)		106.4000	32	3.325000	--
TSCM	.0909	.1125000	1	.1125000	N.S.
RM (TSC)		39.60000	32	1.237500	--

TABLE 14

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART C

CELL MEANS

T = 1		1	2			
S = 1		.90000	4.12500			
	C =	1	2			
		2.42500	2.60000			
	M =	1	2			
		2.37500	2.65000			
	S =	1	2			
		2.15000	2.87500			
T = 1		1	2			
C = 1		.75000	1.05000			
C = 2		4.10000	4.15000			
T = 2		1	2			
C = 1		.60000	1.20000			
C = 2		4.15000	4.10000			
S = 1		1	2			
C = 1		2.05000	2.80000			
C = 2		2.70000	2.50000			
T = 1						
S = 1		1	2			
C = 1		.20000	1.30000			
C = 2		1.00000	1.10000			
T = 2						
S = 1		1	2			
C = 1		3.90000	4.30000			
C = 2		4.40000	3.90000			
T = 1	S = 1					
R =		1	2	3	4	5
C = 1		.00000	.00000	.00000	.00000	1.00000
C = 2		.50000	3.50000	.00000	2.50000	.00000
T = 1	S = 2					
R =		1	2	3	4	5
C = 1		.00000	2.00000	3.00000	.00000	.00000
C = 2		3.00000	2.50000	.00000	.00000	.00000
T = 2	S = 1					
R =		1	2	3	4	5
C = 1		5.00000	2.50000	2.50000	4.50000	5.00000
C = 2		5.00000	4.50000	2.00000	5.00000	5.00000
T = 2	S = 2					
R =		1	2	3	4	5
C = 1		3.50000	5.00000	5.00000	3.50000	5.00000
C = 2		1.50000	4.00000	2.00000	3.00000	5.00000

TABLE 15

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART D

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	41.1168	101.2500	1	101.2500	.01
T (Treatment)	39.3096	96.80000	1	96.80000	.01
S (Sex)	.0000	.0	1	.0	N.S.
C (Cont. Status)	2.0305	5.000000	1	5.000000	N.S.
M (Measures)	16.0000	3.200000	1	3.200000	.01
TS	.0203	.5000000E-01	1	.5000000E-01	N.S.
TC	2.4569	6.050000	1	6.050000	N.S.
SC	.5076	1.250000	1	1.250000	.01
TM	12.2500	2.450000	1	2.450000	N.S.
SM	.2500	.5000000E-01	1	.5000000E-01	N.S.
TM	.2500	.5000000E-01	1	.5000000E-01	N.S.
SC	.7310	1.800000	1	1.800000	N.S.
SM	.0000	-.7389644E-12	1	-.7389644E-12	N.S.
TM	1.0000	.2000000	1	.2000000	N.S.
TM	1.0000	.2000000	1	.2000000	N.S.
(TSC)		78.80000	32	2.462500	- -
CM	2.2500	.4500000	1	.4500000	N.S.
(TSC)		6.400000	32	.2000000	- -

TABLE 16

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART D

CELL MEANS

T =	1	2				
S =	.02500	2.22500				
	1	2				
C =	1.12500	1.12500				
	1	2				
M =	1.37500	.87500				
	1	2				
S =	.92500	1.32500				
	1	2				
T = 1	.00000	.05000				
O =	2.25000	2.20000				
	1	2				
T = 1	.00000	.05000				
C =	2.75000	1.70000				
	1	2				
S = 1	1.25000	1.00000				
2	1.50000	.75000				
T = 1						
C =	1	2				
S = 1	.00000	.00000				
2	.00000	.10000				
T = 2						
C =	1	2				
S = 1	2.50000	2.00000				
2	3.00000	1.40000				
T = 1 S = 1						
R =	1	2	3	4	5	
C = 1	.00000	.00000	.00000	.00000	.00000	
2	.00000	.00000	.00000	.00000	.00000	
T = 1 S = 2						
R =	1	2	3	4	5	
C = 1	.00000	.00000	.00000	.00000	.00000	
2	.00000	.50000	.00000	.00000	.00000	
T = 2 S = 1						
R =	1	2	3	4	5	
C = 1	4.00000	1.00000	.00000	3.50000	4.00000	
2	.00000	3.00000	.00000	4.00000	3.00000	
T = 2 S = 2						
R =	1	2	3	4	5	
C = 1	2.50000	4.00000	3.00000	3.00000	2.50000	
2	.00000	1.00000	4.00000	.50000	1.50000	

TABLE 17

PLAYDAY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART E

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	43.9207	270.1125	1	270.1125	.01
T (Treatment)	39.2703	241.5125	1	241.5125	.01
S (Sex)	.0183	.1125000	1	.1125000	N.S.
C (Cont. Status)	.7337	4.512500	1	4.512500	N.S.
M (Measures)	17.5208	10.51250	1	10.51250	.01
TS	.2459	1.512500	1	1.512500	N.S.
TC	.2459	1.512500	1	1.512500	N.S.
SC	2.2134	13.61250	1	13.61250	N.S.
TM	9.1875	5.512500	1	5.512500	.01
SM	2.5208	1.512500	1	1.512500	N.S.
CM	6.0208	3.612500	1	3.612500	.05
TSC	1.2703	7.812500	1	7.812500	N.S.
TSM	.1875	.1125000	1	.1125000	N.S.
TCM	1.6875	1.012500	1	1.012500	N.S.
SCM	7.5208	4.512500	1	4.512500	.01
R (TSC)		196.8000	32	6.150000	- -
SCM	2.5208	1.512500	1	1.512500	N.S.
R4 (TSC)		19.20000	32	.6000000	

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TABLE 18

PEABODY VERSUS DISTAR

DISTAR PLACEMENT TEST: PART E

CELL MEANS

T =	1		2				
	.10000		3.57500				
S =	1		2				
	1.87500		1.80000				
C =	1		2				
	2.07500		1.60000				
M =	1		2				
	1.47500		2.20000				
S =	1		2				
T = 1	.00000		.20000				
2	3.75000		3.40000				
C =	1		2				
T = 1	.20000		.00000				
2	3.95000		3.20000				
C =	1		2				
S = 1	1.70000		2.05000				
2	2.45000		1.15000				
T = 1							
C =	1		2				
S = 1	.00000		.00000				
2	.40000		.00000				
T = 2							
C =	1		2				
S = 1	3.40000		4.10000				
2	4.50000		2.30000				
T = 1 S = 1							
R =	1		2		3	4	5
C = 1	.00000		.00000		.00000	.00000	.00000
2	.00000		.00000		.00000	.00000	.00000
T = 1 S = 2							
R =	1		2		3	4	5
C = 1	.00000		2.00000		.00000	.00000	.00000
2	.00000		.00000		.00000	.00000	.00000
T = 2 S = 1							
R =	1		2		3	4	5
C = 1	6.50000		2.50000		.00000	4.50000	3.50000
2	1.00000		6.50000		.00000	7.00000	6.00000
T = 2 S = 2							
R =	1		2		3	4	5
C = 1	4.50000		7.00000		2.50000	4.50000	4.00000
2	.00000		3.50000		2.50000	.50000	5.00000

TABLE 17

PEARSON VERSUS DISTAR

ITPA: GRAMMATIC CLOSURE SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F		DF		P LEVEL
MEAN	984.0708	86198.45	1	86198.45	.01
T (Treatment)	.2080	2.450000	1	2.450000	N.S.
S (Sex)	.4161	36.45000	1	36.45000	N.S.
C (Cont. Status)	.0143	1.250000	1	1.250000	N.S.
M (Measures)	9.4775	88.20000	1	88.20000	.01
TS	.0965	8.450000	1	8.450000	N.S.
TC	.7814	68.45000	1	68.45000	N.S.
SC	3.0419	266.4500	1	266.4500	N.S.
TM	.0860	.8000000	1	.8000000	N.S.
SM	1.7408	16.20000	1	16.20000	N.S.
CM	.5373	5.000000	1	5.000000	N.S.
TSC	1.3705	120.0500	1	120.0500	N.S.
TSM	.0860	.8000000	1	.8000000	N.S.
TCM	.0215	.2000000	1	.2000000	N.S.
SCM	.7737	7.200000	1	7.200000	N.S.
R (TSC)		2803.000	32	87.59375	--
TSCM	.0860	.8000000	1	.8000000	N.S.
TM (TSC)		297.8000	32	9.306250	--

Proger

TABLE 20

PEABODY VERSUS DISTAR

ITPA: GRAMMATIC CLOSURE SCALED SCORE

CELL MEANS

T =		1	2			
		32.65000	33.00000			
S =		1	2			
		32.15000	37.50000			
C =		1	2			
		32.70000	32.95000			
M =		1	2			
		31.77500	33.87500			
S =		1	2			
T =	1	32.30000	33.00000			
	2	32.00000	34.00000			
C =		1	2			
T =	1	33.45000	31.85000			
	2	31.35000	34.05000			
C =		1	2			
S =	1	33.85000	30.45000			
	2	31.55000	35.45000			
T =	1					
C =		1	2			
S =	1	33.70000	30.90000			
	2	33.20000	32.80000			
T =	2					
C =		1	2			
S =	1	34.00000	30.00000			
	2	29.90000	38.10000			
T =	1	S = 1				
R =		1	2	3	4	5
C =	1	35.00000	30.50000	35.00000	35.00000	33.00000
	2	26.00000	29.00000	33.00000	33.50000	33.00000
T =	1	S = 2				
R =		1	2	3	4	5
C =	1	33.00000	34.00000	31.00000	33.00000	35.00000
	2	36.00000	32.00001	30.00000	33.00000	33.00000
T =	2	S = 1				
R =		1	2	3	4	5
C =	1	41.50000	36.00000	31.00000	30.50000	31.00000
	2	13.00001	24.50000	35.00000	36.50000	41.00000
T =	2	S = 2				
R =		1	2	3	4	5
C =	1	30.00000	27.00000	33.50000	24.50000	34.50000
	2	31.00000	27.00000	31.50000	26.00001	45.00000

Proger

TABLE 21

PEABODY VERSUS DISTAR

ITPA: AUDITORY ASSOCIATION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	28.0382	80835.61	1	80835.61	.01
T (Treatment)	5.8156	382.8125	1	382.8125	.01
S (Sex)	.0093	.6125000	1	.6125000	N.S.
C (Cont. Status)	.0837	5.512500	1	5.512500	N.S.
M (Measures)	6.4787	108.1125	1	108.1125	.05
TS	.0047	.3125000	1	.3125000	N.S.
TC	.5334	35.11250	1	35.11250	N.S.
SC	2.8730	189.1125	1	189.1125	N.S.
TM	.3303	5.512500	1	5.512500	N.S.
SM	2.9730	49.61250	1	49.61250	N.S.
CM	.7199	12.01250	1	12.01250	N.S.
TSC	2.7803	183.0125	1	183.0125	N.S.
TSM	.0067	.1125000	1	.1125000	N.S.
TCM	3.7760	63.01250	1	63.01250	N.S.
SCM	.2704	4.512500	1	4.512500	N.S.
R (TSC)		2106.400	32	65.82500	--
TCM	.2165	3.612500	1	3.612500	N.S.
M (TSC)		534.0000	32	16.68750	--

TABLE 22

PEABODY VERSUS DISTAR

ITPA: AUDITORY ASSOCIATION SCALED SCORE

CELL MEANS

T =		1	2				
		33.97500	29.60000				
S =		1	2				
		31.87500	31.70000				
C =		1	2				
		31.52500	32.05000				
M =		1	2				
		31.62500	32.95000				
S =		1	2				
T =	1	34.00000	33.95000				
	2	29.75000	29.45000				
C =		1	2				
T =	1	33.05000	34.90000				
	2	30.00000	29.20000				
C =		1	2				
S =	1	33.15000	30.60000				
	2	29.90000	33.50000				
T = 1							
C =		1	2				
S =	1	33.10000	34.90000				
	2	33.00000	34.90000				
T = 2							
C =		1	2				
S =	1	33.20000	26.30000				
	2	26.80000	32.10000				
T = 1	S = 1						
R =		1	2	3	4	5	
C =	1	33.00000	28.00000	36.00000	35.00000	33.00000	
	2	35.50000	35.00000	34.00000	37.00000	33.00000	
T = 1	S = 2						
R =		1	2	3	4	5	
C =	1	33.00000	34.00000	31.00000	33.00000	34.00000	
	2	34.50000	38.50000	30.50000	33.00000	34.00000	
T = 2	S = 1						
R =		1	2	3	4	5	
C =	1	30.00000	34.50000	32.00000	30.00000	39.50000	
	2	6.00000	17.50000	33.00000	38.00000	37.00000	
T = 2	S = 2						
R =		1	2	3	4	5	
C =	1	25.50000	31.50000	29.50000	23.00000	25.50000	
	2	35.00000	35.00000	34.50000	29.00000	29.00000	

TABLE 23

PEABODY VERSUS DISTAR

ITPA: VERBAL EXPRESSION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	72.3521	84695.11	1	84695.11	.01
T (Treatment)	7.7033	556.5125	1	566.5125	.01
S (Sex)	1.5616	112.8125	1	112.8125	N.S.
C (Cont. Status)	.5234	37.81250	1	37.81250	N.S.
M (Measures)	14.9717	241.5125	1	241.5125	.01
TS	1.4328	103.5125	1	103.5125	N.S.
TC	.0043	.3215000	1	.3215000	N.S.
SC	.5234	37.81250	1	37.81250	N.S.
TM	2.1767	35.11250	1	35.11250	N.S.
SM	3.4785	56.11250	1	56.11250	N.S.
CM	1.1786	19.01250	1	19.01250	N.S.
TSC	.7310	52.81250	1	52.81250	N.S.
TSM	2.3441	37.81250	1	37.81250	N.S.
TCM	4.3588	70.31250	1	70.31250	.05
SCM	1.4328	23.11250	1	23.11250	N.S.
R (TSC)		23.11250	32	72.24375	- -
TSCM	1.5692	25.31250	1	25.31250	N.S.
RI (TSC)		516.2000	32	16.13125	- -

TABLE 24

PEABODY VERSUS DISTAR

ITPA: VERBAL EXPRESSION SCALED SCORE

CELL MEANS

T =		1	2				
		29.30000	35.17500				
S =		1	2				
		33.72500	31.35000				
C =		1	2				
		33.72500	31.35000				
M =		1	2				
		30.80000	34.27500				
S =		1	2				
T =	1	29.35000	29.85000				
	2	37.50000	32.85000				
C =		1	2				
T =	1	30.65000	29.15000				
	2	35.80000	34.55000				
C =		1	2				
S =	1	35.10000	32.35000				
	2	31.35000	31.35000				
T = 1							
C =		1	2				
S =	1	32.20000	27.70000				
	2	29.10000	30.60000				
T = 2							
C =		1	2				
S =	1	38.00000	37.00000				
	2	33.60000	32.10000				
T = 1	S = 1						
R =		1	2	3	4	5	
C =	1	28.00000	36.00000	36.00000	31.00000	30.00000	
	2	29.00000	25.50000	29.00000	29.00000	26.00000	
T = 1	S = 2						
R =		1	2	3	4	5	
C =	1	27.00000	33.00000	26.00000	31.50000	28.00000	
	2	32.50000	38.50000	27.00000	26.00000	29.00000	
T = 2	S = 1						
R =		1	2	3	4	5	
C =	1	33.50000	44.50000	36.00000	39.50000	36.50000	
	2	19.00000	35.50000	32.00000	50.00000	48.50000	
T = 2	S = 2						
R =		1	2	3	4	5	
C =	1	27.50000	34.50000	36.50000	34.50000	35.00000	
	2	36.00000	21.50000	34.50000	30.00000	34.50000	

TABLE 25

PEABODY VERSUS DISTAR

ITPA: VISUAL ASSOCIATION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	76.5814	98841.80	1	98841.80	.01
T (Treatment)	.9219	57.80000	1	57.80000	N.S.
S (Sex)	6.1761	387.2000	1	387.2000	.05
C (Cont. Status)	.0287	1.800000	1	1.800000	N.S.
M (Measures)	16.9043	328.0500	1	328.0500	.01
TS	8.9610	561.8000	1	561.8000	.01
TC	.1148	7.200000	1	7.200000	N.S.
SC	6.1761	387.2000	1	387.2000	.05
TM	3.9188	76.05000	1	76.05000	N.S.
SM	.7446	14.45000	1	14.45000	N.S.
CM	1.1362	22.05000	1	22.05000	N.S.
TSC	7.9753	500.0000	1	500.0000	.01
TSM	.9301	18.05000	1	18.05000	N.S.
TCM	2.8058	54.45000	1	54.45000	N.S.
SCM	3.5272	68.45000	1	68.45000	N.S.
R (TSC)		2006.200	32	62.69385	--
SCM	2.8058	54.45000	1	54.45000	N.S.
R (TSC)		621.0000	32	19.40625	--

TABLE 26

PEABODY VERSUS DICTAR

ITPA: VISUAL ASSOCIATION SCALED SCORE

CELL MEANS

T =		1	2				
		36.00000	34.30000				
S =		1	2				
		37.35000	32.95000				
C =		1	2				
		35.30000	35.00000				
M =		1	2				
		33.12500	37.17500				
S =		1	2				
T =	1	35.55000	36.45000				
	2	39.15000	29.45000				
C =		1	2				
T =	1	35.85000	36.15000				
	2	34.75000	33.95000				
C =		1	2				
S =	1	35.30000	39.40000				
	2	35.30000	30.60000				
T =	1						
C =		1	2				
S =	1	35.70000	35.40000				
	2	36.00000	36.90000				
T =	2						
C =		1	2				
S =	1	34.90000	43.40000				
	2	34.60000	24.30000				
T =	1	S = 1					
R =		1	2	3	4	5	
C =	1	33.00000	31.00000	39.50000	37.50000	37.50000	
	2	37.00000	31.00000	37.50000	38.50000	33.00000	
T =	1	S = 2					
R =		1	2	3	4	5	
C =	1	33.00000	32.00000	35.00000	44.00000	36.00000	
	2	40.00000	37.00000	35.00000	38.50000	34.00000	
T =	2	S = 1					
R =		1	2	3	4	5	
C =	1	34.50000	38.00000	32.00000	32.50000	37.50000	
	2	40.50000	38.00000	57.00000	41.00000	40.50000	
T =	2	S = 2					
R =		1	2	3	4	5	
C =	1	36.50000	42.00000	35.00000	27.00000	32.50000	
	2	33.00000	19.00000	35.00000	10.50000	24.00000	

TABLE 27

PEABODY VERSUS DISTAR

SPENCER MEMORY FOR SENTENCE TEST

SOURCE	F		DF		
MEAN	17.4862	122.5125	1	122.5125	.01
T (Treatment)	13.5040	94.61250	1	94.61250	.01
S (Sex)	.9438	6.612500	1	6.612600	N.S.
C (Cont. Status)	.4014	2.812500	1	2.812500	N.S.
M (Measures)	.0220	.1250000E-01	1	.1250000E-01	N.S.
TS	1.3006	9.112500	1	9.112500	N.S.
TC	.9438	6.612500	1	6.612500	N.S.
SC	.6441	4.512500	1	4.512500	N.S.
TM	.1978	.1125000	1	.1125000	N.S.
SM	1.7802	1.012500	1	1.012500	N.S.
CM	3.7143	2.112500	1	2.112500	N.S.
TSC	.2159	1.512500	1	1.512500	N.S.
TSM	.5495	.3125000	1	.3125000	N.S.
TCM	3.7143	2.112500	1	2.112500	N.S.
SCM	.5495	.3125000	1	.3125000	N.S.
R (TSC)		224.2000	32	7.006250	- -
PSCM	.5495	.3125000	1	.3125000	N.S.
PM (TSC)		18.20000	32	.5687500	- -

TABLE 28

PEABODY VERSUS DISTAR

SPENCER MEMORY FOR SENTENCE TEST

CELL MEANS

T =		1	2			
		.15000	2.32500			
S =		1	2			
		.95000	1.52500			
C =		1	2			
		1.05000	1.42500			
M =		1	2			
		1.25000	1.22500			
S =		1	2			
T = 1	1	.20000	.10000			
	2	1.70000	2.95000			
C =		1	2			
T = 1	1	.75000	.05000			
	2	1.35000	2.60000			
C =		1	2			
S = 1	1	1.00000	.90000			
	2	1.10000	1.95000			
T = 1						
C =		1	2			
S = 1	1	.40000	.00000			
	2	.10000	.10000			
T = 2						
C =		1	2			
S = 1	1	1.60000	1.80000			
	2	2.10000	3.80000			
T = 1 S = 1						
R =		1	2	3	4	5
C = 1	1	.00000	.00000	2.00000	.00000	.00000
	2	.00000	.00000	.00000	.00000	.00000
T = 1 S = 2						
R =		1	2	3	4	5
C = 1	1	.00000	.50000	.00000	.00000	.00000
	2	.50000	.00000	.00000	.00000	.00000
T = 2 S = 1						
R =		1	2	3	4	5
C = 1	1	5.00000	1.50000	.00000	1.00000	.50000
	2	.00000	2.00000	.00000	6.00000	1.00000
T = 2 S = 2						
R =		1	2	3	4	5
C = 1	1	1.00000	4.50000	2.50000	2.00000	.50000
	2	.00000	9.00000	2.50000	1.00000	0.50000

PEABODY VERSUS DISTAR

PEABODY PICTURE VOCABULARY TEST MENTAL AGE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF		P
MEAN	192.5821	181165.6	1	181165.6	.01
T (Treatment)	19.8748	18696.61	1	18696.61	.01
S (Sex)	1.0196	959.1125	1	959.1125	N.S.
C (Cont. Status)	.1053	99.01250	1	99.01250	N.S.
M (Measures)	9.0333	465.6125	1	465.6125	.01
TS	.1149	108.1125	1	108.1125	N.S.
TC	1.9492	1833.612	1	1833.612	N.S.
SC	.4069	382.8125	1	382.8125	N.S.
TM	.8442	43.51250	1	43.51250	N.S.
SM	3.6690	189.1125	1	189.1125	N.S.
CM	.0196	1.012500	1	1.012500	N.S.
TSC	.6608	621.6125	1	621.6125	N.S.
TSM	1.8356	94.61250	1	94.61250	N.S.
TCM	.0410	2.112500	1	2.112500	N.S.
SCM	.0119	.6125000	1	.6125000	N.S.
R (TSC)		30103.00	32	940.7187	- -
TSCM	.1069	5.512500	1	5.512500	N.S.
M (TSC)		1649.400	32	51.54375	

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Proger

TABLE 30

PEABODY VERSUS DISTAR

PEABODY PICTURE VOCABULARY TEST MENTAL AGE

CELL MEANS

T =	1	32.30000	62.87500
S =	1	51.05000	44.12500
C =	1	46.47500	48.70000
M =	1	45.17500	50.00000
S =	1	34.60000	30.00000
T = 1	2	67.50000	58.25000
C =	1	26.40000	38.20000
T = 1	2	66.55000	59.20000
C =	1	47.75000	54.35000
S = 1	2	45.20000	43.05000
T = 1			
C =	1	29.30000	39.90000
S = 1	2	23.50000	36.50000
T = 2			
C =	1	56.20000	68.80000
S = 1	2	66.90000	49.60000

T = 1 S = 1

R =	1	2	3	4	5
C = 1	12.50000	37.00000	32.00000	36.50000	28.50000
2	65.00000	46.50000	28.50000	36.50000	21.50000

T = 1 S = 2

R =	1	2	3	4	5
C = 1	10.00000	34.50000	27.00000	22.00000	24.00000
2	36.00000	41.50000	46.00000	26.50000	32.50000

T = 2 S = 1

R =	1	2	3	4	5
C = 1	107.30000	63.00000	32.50000	51.50000	77.00000
2	73.00000	76.50000	12.50000	98.00000	84.00000

T = 2 S = 2

R =	1	2	3	4	5
C = 1	44.00000	100.50000	64.50000	39.00000	86.50000
2	45.50000	10.00000	81.00000	57.00000	54.50000

APPENDIX B

TABLES FOR DISTAR INTENSIVE STUDY: PRETEST – POSTTEST ANALYSES

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: TOTAL SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	66.4073	71722.67	1	71722.67	N.S.
S (SEX)	.4649	84.37500	1	84.37500	N.S.
Q (I.Q.)	9.7692	1080.042	1	1080.042	.01
C (Cont. Status)	.8289	112.0208	2	56.01042	N.S.
M (Measurement)	13.5056	900.3750	1	900.3750	N.S.
SQ	1.6417	181.5000	1	181.5000	N.S.
SC	.4344	86.68750	2	43.34375	N.S.
QC	.6112	135.1458	2	67.57292	N.S.
SM	.9070	16.66667	1	16.66667	N.S.
QM	5.7554	66.66667	1	66.66667	.05
CM	.3609	21.43750	2	10.71875	N.S.
SQC	.9025	199.5625	2	99.78125	N.S.
SQM	1.5863	18.37500	1	18.37500	N.S.
SCM	23.4444	30.77083	2	15.38542	.05
QCM	2.5638	59.39583	2	29.69792	N.S.
R(SQC)		3980.000	36	110.5556	- -
SQCM	.0567	1.312500	2	.6562500	N.S.
RM(SQC)		417.0000	36	11.58333	- -

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TABLE 32

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: TOTAL SCORE

CELL MEANS

S =	1	2			
	26.39583	28.27083			
Q =	1	2			
	30.68750	23.97917			
C =	1	2	3		
	27.03125	26.18750	28.78125		
M =	1	2			
	24.27083	30.39583			
Q =	1	2			
S = 1	31.12500	21.66667			
2	30.25000	26.29167			
C =	1	2	3		
S = 1	27.43750	24.56250	27.18750		
2	26.62500	27.81250	30.37500		
C =	1	2	3		
Q = 1	28.93750	31.00000	32.12500		
2	25.12500	21.37500	25.43750		
S = 1					
C =	1	2	3		
Q = 1	32.50000	29.00000	31.87500		
2	22.37500	20.12500	22.50000		
S = 2					
C =	1	2	3		
Q = 1	25.37500	33.00000	32.37500		
2	27.87500	22.62500	28.37500		
S = 1	Q = 1				
R =	1	2	3	4	
C = 1	29.00000	33.50000	34.50000	33.00000	
2	31.00000	31.50000	22.00000	31.50000	
3	30.50000	30.50000	34.50000	32.00000	
S = 1	Q = 2				
R =	1	2	3	4	
C = 1	22.50000	9.50000	23.50000	34.00000	
2	28.50000	16.50000	7.00000	28.50000	
3	35.00000	29.50000	14.50000	11.00000	
S = 2	Q = 1				
R =	1	2	3	4	
C = 1	10.00000	26.50000	35.00000	30.00000	
2	30.50000	32.50000	35.00000	34.00000	
3	34.00000	32.50000	34.50000	28.50000	
S = 2	Q = 2				
R =	1	2	3	4	
C = 1	26.00000	27.50000	29.00000	29.00000	
2	34.00000	16.50000	11.50000	8.50000	
3	24.50000	27.00000	30.50000	31.50000	

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART A

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	193.4628	11948.34	1	11948034	.05
S (SEX)	.0249	.8437500	1	.8437500	N.S.
Q (I.Q.)	5.2177	61.76042	1	61.76042	.05
C (Cont. Status)	.8073	20.25000	2	10.12500	N.S.
M (Measurement)	7.8762	78.84375	1	78.84375	N.S.
SQ	2.8592	33.84375	1	88.84375	N.S.
SC	1.0278	9.250000	2	4.625000	N.S.
QC	1.0595	25.08333	2	12.54167	N.S.
SM	.7257	5.510417	1	5.510417	N.S.
QM	4.2838	10.01042	1	10.01042	.05
CM	.0275	.2500000	2	.1250000	N.S.
SQC	.3802	9.000000	2	4.500000	N.S.
SQM	3.2496	7.593750	1	7.593750	N.S.
SCM	.4444	.3333333	2	.1666667	N.S.
QCM	1.9435	9.083333	2	4.541667	N.S.
R(SQC)		426.1250	36	11.83681	- -
SQCM	.1605	.7500000	2	.3750000	N.S.
RM(SQC)		84.12500	36	2.336806	- -

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TABLE 34

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART A

CELL MEANS

S =	1	11.06250	2 11.25000		
Q =	1	11.95833	2 10.35417		
C =	1	11.15625	2 10.59375	3 11.71875	
M =	1	10.25000	2 12.06250		
Q =	1	12.45833	2 9.66667		
S = 1	2	11.45833	11.04167		
C =	1	11.50000	2 10.25000	3 11.43750	
S = 1	2	10.31250	10.93750	12.00000	
C =	1	11.31250	2 12.00000	3 12.56250	
Q = 1	2	11.00000	9.18750	10.87500	
S = 1					
C =	1	12.62500	2 11.87500	3 12.87500	
Q = 1	2	10.37500	8.62500	10.00000	
S = 2					
C =	1	10.00000	2 12.12500	3 12.25000	
Q = 1	2	11.62500	9.75000	11.75000	
S = 1 Q = 1					
R =	1		2	3	4
C = 1		13.00000	12.50000	12.50000	12.50000
2		11.50000	12.00000	12.50000	11.50000
3		13.00000	12.50000	13.00000	13.00000
S = 1 Q = 2					
R =	1		2	3	4
C = 1		11.50000	5.00000	12.00000	13.00000
2		10.00000	8.50000	4.00000	12.00000
3		13.00000	11.50000	9.00000	7.50000
S = 2 Q = 1					
R =	1		2	3	4
Q = 1		4.00000	11.50000	13.00000	11.50000
2		11.00000	12.00000	13.00000	12.50000
3		13.00000	13.00000	13.00000	10.00000
S = 2 Q = 2					
R =	1		2	3	4
C = 1		10.50000	13.00000	12.50000	10.50000
2		13.00000	9.00000	12.50000	8.50000
3		10.50000	10.50000	13.00000	13.00000

TABLE 35

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART B

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	76.3151	2233.010	1	2233.010	N.S.
S (SEX)	.5505	5.510417	1	5.510417	N.S.
Q (I.Q.)	6.3218	29.26042	1	29.26042	.05
C (Cont. Status)	1.0000	11.39583	2	5.697917	N.S.
M (Measurement)	8.3080	25.01042	1	25.01042	N.S.
SQ	2.1628	10.01042	1	10.01042	N.S.
SC	1.9231	6.770833	2	3.385417	N.S.
QC	1.2311	11.39583	2	5.697917	N.S.
SM	2.4694	1.260417	1	1.260417	N.S.
QM	2.8058	3.010417	1	3.101417	N.S.
CM	.8835	1.895833	2	.9479167	N.S.
SQC	.3803	3.520833	2	1.760417	N.S.
SQM	.4757	.5104167	1	.5104167	N.S.
SCM	49.0000	1.020833	2	.5104167	.05
QCM	1.0000	2.145833	2	1.072917	N.S.
R(SQC)		166.6250	36	4.628472	- -
SQCM	.0097	.2083333E-01	2	.1041667E-01	N.S.
RM(SQC)		38.62500	36	1.072917	- -

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TABLE 36

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART B

CELL MEANS

S =	1	2			
	4.58333	5.06250			
Q =	1	2			
	5.37500	4.27083			
C =	1	2	3		
M = 1	4.81250	4.40625	5.25000		
M = 2	4.31250	5.33333			
Q =	1	2			
S = 1	5.45833	3.70833			
2	5.29167	4.83333			
C =	1	2	3		
S = 1	4.93750	4.06250	4.75000		
2	4.68750	4.75000	5.75000		
C =	1	2	3		
Q = 1	4.93750	5.37500	5.81250		
2	4.68750	3.43750	4.68750		
S = 1					
C =	1	2	3		
Q = 1	5.62500	5.12500	5.62500		
2	4.25000	3.00000	3.87500		
S = 2					
C =	1	2	3		
Q = 1	4.25000	5.62500	6.00000		
2	5.12500	3.87500	5.50000		
S = 1	Q = 1				
R =	1	2	3	4	
C = 1	4.50000	6.00000	6.00000	6.00000	
2	5.50000	6.00000	3.50000	5.50000	
3	5.00000	5.50000	6.00000	6.00000	
S = 1	Q = 2				
R =	1	2	3	4	
C = 1	5.00000	2.00000	4.00000	6.00000	
2	6.00000	1.50000	.00000	4.50000	
3	6.00000	5.50000	2.50000	1.50000	
S = 2	Q = 1				
R =	1	2	3	4	
C = 1	1.00000	4.50000	6.00000	5.50000	
2	4.50000	6.00000	6.00000	6.00000	
3	6.00000	6.00000	6.00000	6.00000	
S = 2	Q = 2				
R =	1	2	3	4	
C = 1	4.00000	5.00000	5.50000	6.00000	
2	5.50000	2.00000	5.50000	2.50000	
3	4.50000	5.50000	6.00000	6.00000	

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART O

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	151.1453	1820.042	1	18201042	N.S.
S (SEX)	.6944	4.166667	1	4.166667	N.S.
Q (I.Q.)	6.0629	12.04167	1	12.04167	.05
C (Cont. Status)	.5068	.7708333	2	.3854167	N.S.
M (Measurement)	3.2400	13.50000	1	13.50000	N.S.
SQ	3.0210	6.000000	1	6.000000	N.S.
SC	.1478	.8958333	2	.4479167	N.S.
QC	.3829	1.520833	2	.7604167	N.S.
SM	1.0000	3.375000	1	3.375000	N.S.
QM	6.8182	4.166667	1	4.166667	.05
CM	1.1096	1.687500	2	.8437500	N.S.
SQC	1.5262	6.062500	2	3.031250	N.S.
SQM	5.5227	3.375000	1	3.375000	.05
SCM	.6923	.5625000	2	.2812500	N.S.
QCM	1.2443	1.520833	2	.7604167	N.S.
R(SQC)		71.50000	36	1.986111	- -
SQCM	.6648	.8125000	2	.4062500	N.S.
RM(SQC)		22.00000	35	.6111111	- -

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TABLE 38

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART C

CELL MEANS

S =		1	2		
Q =	1	4.14583	4.56250		
	2	4.70833	4.00000		
C =		1	2	3	
M =	1	4.25000	4.34375	4.46875	
	2	3.97917	4.72917		
Q =		1	2		
S =	1	4.75000	3.54167		
C =	2	4.66667	4.45833		
S =		1	2	3	
	1	4.12500	4.18750	4.12500	
C =	2	4.37500	4.50000	4.81250	
Q =		1	2	3	
	1	4.50000	4.62500	5.00000	
	2	4.00000	4.06250	3.93750	
S = 1	C =				
Q =		1	2	3	
	1	4.87500	4.37500	5.00000	
	2	3.37500	4.00000	3.25000	
S = 2	C =				
Q =		1	2	3	
	1	4.12500	4.87500	5.00000	
	2	4.62500	4.12500	4.62500	
S = 1	Q = 1				
C =	R =	1	2	3	4
	1	4.50000	5.00000	5.00000	5.00000
	2	4.50000	5.00000	3.00000	5.00000
	3	5.00000	5.00000	5.00000	5.00000
S = 1	Q = 2				
C =	R =	1	2	3	4
	1	2.50000	2.50000	3.50000	5.00000
	2	4.50000	4.00000	3.00000	4.50000
	3	5.00000	5.00000	1.50000	1.50000
S = 2	Q = 1				
C =	R =	1	2	3	4
	1	3.00000	3.50000	5.00000	5.00000
	2	5.00000	4.50000	5.00000	5.00000
	3	5.00000	5.00000	5.00000	5.00000
S = 2	Q = 2				
C =	R =	1	2	3	4
	1	5.00000	5.00000	3.50000	5.00000
	2	5.00000	5.00000	5.00000	1.50000
	3	4.00000	4.50000	5.00000	5.00000

DIST R LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART D

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	21.8344	688.0104	1	688.0104	N.S.
S (SEX)	.5848	1.760417	1	1.760417	N.S.
Q (I.Q.)	8.7009	31.51042	1	31.51042	.01
C (Cont. Status)	1.4204	4.645833	2	2.322917	N.S.
M (Measurement)	67.2400	17.51042	1	17.51042	N.S.
SQ	.8313	3.010417	1	3.010417	N.S.
SC	.2264	1.645833	2	.8229167	N.S.
QC	.4516	3.270833	2	1.635417	N.S.
SM	.0204	.1041667E-01	1	.1041667E-01	N.S.
QM	.4491	.2604167	1	.2604167	N.S.
CM	2.3973	3.645833	2	1.822917	N.S.
SQC	1.0038	7.270833	2	3.635417	N.S.
SQM	.8802	.5104167	1	.5104167	N.S.
SCM	3.3077	.8958333	2	.4479167	N.S.
QCM	1.3114	1.520833	2	.7604167	N.S.
R(SQC)		130.3750	36	3.621528	- -
SQCM	.2335	.2708333	2	.1354167	N.S.
RM(SQC)		20.87500	36	.5798611	- -

TABLE 40

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART D

CELL MEANS

S =	1	2			
	2.54167	2.81250			
Q =	1	2			
	3.25000	2.10417			
C =	1	2	3		
	2.62500	2.43750	2.96875		
M =	1	2			
	2.25000	3.10417			
Q =	1	2			
S = 1	3.29167	1.79167			
2	3.20833	2.41667			
C =	1	2	3		
S = 1	2.62500	2.12500	2.87500		
2	2.62500	2.75000	3.06250		
C =	1	2	3		
Q = 1	2.93750	3.12500	3.68750		
2	2.31250	1.75000	2.25000		
S = 1					
C =	1	2	3		
Q = 1	3.50000	2.75000	3.62500		
2	1.75000	1.50000	2.12500		
S = 2					
C =	1	2	3		
Q = 1	2.37500	3.50000	3.75000		
2	2.87500	2.00000	2.37500		
S = 1	Q = 1				
R =	1	2	3	4	
C = 1	3.00000	4.00000	4.00000	3.00000	
2	3.00000	4.00000	.50000	3.50000	
3	3.00000	4.00000	4.00000	3.50000	
S = 1	Q = 2				
R =	1	2	3	4	
C = 1	1.00000	.00000	2.00000	4.00000	
2	3.50000	.00000	.00000	2.50000	
3	4.00000	3.50000	1.00000	.00000	
S = 2	Q = 1				
R =	1	2	3	4	
C = 1	.50000	2.50000	4.00000	2.50000	
2	2.50000	3.50000	4.00000	4.00000	
3	4.00000	4.00000	4.00000	3.00000	
S = 2	Q = 2				
R =	1	2	3	4	
C = 1	3.00000	3.00000	3.00000	2.50000	
2	4.00000	.00000	4.00000	.00000	
3	2.00000	3.50000	1.50000	2.50000	

TABLE 41

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART E

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	16.9744	1768.167	1	1768.167	N.S.
S (SEX)	13.4444	5.041667	1	5.041667	N.S.
Q (I.Q.)	13.9925	104.1667	1	104.1667	.01
C (Cont. Status)	.0769	.5833333	2	.2916667	N.S.
M (Measurement)	441.0000	73.50000	1	73.50000	.05
SQ	.0504	.3750000	1	.3750000	N.S.
SC	.2552	4.083333	2	2.041667	N.S.
QC	.5093	7.583333	2	.1666667	N.S.
SM	1.0000	2.041667	1	2.041667	N.S.
QM	.1395	.1666667	1	.1666667	N.S.
CM	.2903	.7500000	2	.3750000	N.S.
SQC	1.0746	16.00000	2	8.000000	N.S.
SQM	1.7093	2.041667	1	2.041667	N.S.
SCM	6.5263	10.33333	2	5.166667	.05
QCM	1.0814	2.583333	2	1.291667	N.S.
R(SQC)		268.0000	36	7.444444	- -
SQCM	.6628	1.583333	2	.7916667	N.S.
RM(SQC)		43.00000	36	1.194444	- -

TABLE 42

DISTAR LONGITUDINAL DATA

DISTAR PLACEMENT TEST: PART E

CELL MEANS

S =		1	2		
Q =		4.06250	4.52083		
C =		1	2		
		5.33333	3.25000		
M =		1	2	3	
		4.18750	4.31250	4.37500	
Q =		1	2		
		3.41667	5.16667		
S = 1	C =	1	2		
	1	5.16667	2.35333		
	2	5.50000	3.54167		
S = 1	C =	1	2	3	
Q =	1	4.25000	3.93750	4.00000	
	2	4.12500	4.06250	4.75000	
S = 1	C =	1	2	3	
Q =	1	5.25000	5.68750	5.06250	
	2	3.12500	2.93750	3.68750	
S = 2	C =	1	2	3	
Q =	1	5.87500	4.87500	4.75000	
	2	2.62500	3.00000	3.25000	
S = 2	C =	1	2	3	
Q =	1	4.62500	5.30000	5.37500	
	2	3.62500	2.87500	4.12500	
S = 1	Q = 1				
R =		1	2	3	4
C =	1	4.00000	6.00000	7.00000	6.50000
	2	6.50000	4.50000	7.50000	6.00000
	3	4.50000	3.50000	6.50000	4.50000
S = 1	Q = 2				
R =		1	2	3	4
C =	1	2.50000	.00000	2.00000	6.00000
	2	4.50000	2.50000	.00000	5.00000
	3	7.00000	4.00000	1.50000	.50000
S = 2	Q = 1				
R =		1	2	3	4
C =	1	1.50000	4.50000	7.00000	5.50000
	2	6.00000	6.50000	7.00000	6.50000
	3	6.00000	4.50000	6.50000	4.50000
S = 2	Q = 2				
R =		1	2	3	4
C =	1	3.50000	2.50000	4.50000	4.00000
	2	5.50000	.50000	4.50000	.00000
	3	3.50000	3.00000	5.00000	5.00000

DISTAR LONGITUDINAL DATA

ITPA: GRAMMATIC CLOSURE SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	806.0662	111044.0	1	111044.0	.05
S (SEX)	.3207	23.01042	1	23.01042	N.S.
Q (I.Q.)	1.2208	137.7604	1	137.7604	N.S.
C (Cont. Status)	.9698	52.27083	2	26.13542	N.S.
M (Measurement)	25.0000	162.7604	1	162.7604	N.S.
SQ	.6359	71.76042	1	71.76042	N.S.
SC	.5665	247.1458	2	123.5729	N.S.
QC	.2388	53.89583	2	26.94792	N.S.
SM	.5529	8.760417	1	8.760417	N.S.
QM	.5421	6.510417	1	6.510417	N.S.
CM	.1114	2.145833	2	1.072917	N.S.
SQC	1.9331	436.2708	2	218.1354	N.S.
SQM	1.3192	15.84375	1	15.84375	N.S.
SCM	.6158	28.52083	2	14.26042	N.S.
QCM	.8023	19.27083	2	9.635417	N.S.
R(SQC)		4062.375	36	112.8437	- -
SQCM	1.9280	46.31250	2	23.15625	N.S.
RM(SQC)		432.3750	36	12.01042	- -

TABLE 44

DISTAR LONGITUDINAL DATA

ITPA: GRAMMATIC CLOSURE SCALED SCORE

CELL MEANS

S =	1	34.50000	33.52083		
Q =	1	35.20833	32.81250		
C =	1	33.31250	33.68750	35.03125	
M =	1	32.70833	35.31250		
Q =	1	34.93333	34.16667		
S = 1	2	35.58333	31.45833		
C =	1	36.06250	32.87500	34.56250	
S = 1	2	30.56250	34.50000	35.50000	
C =	1	33.68750	35.87500	36.06250	
Q = 1	2	32.93750	31.50000	34.00000	
S = 1					
C =	1	35.50000	31.25000	30.75000	
Q = 1	2	35.62500	34.50000	32.37500	
S = 2					
C =	1	30.87500	30.50000	35.37500	
Q = 1	2	30.25000	28.50000	35.62500	
S = 1 Q = 1					
R =	1	2	3	4	
C = 1	33.00000	24.50000	34.00000	54.50000	
2	28.50000	29.50000	33.00000	42.00000	
3	38.50000	24.00000	51.00000	33.00000	
S = 1 Q = 2					
R =	1	2	3	4	
C = 1	35.00000	31.00000	44.00000	31.50000	
2	30.50000	37.50000	31.00000	39.00000	
3	36.50000	28.00000	41.00000	24.00000	
S = 2 Q = 1					
R =	1	2	3	4	
C = 1	34.00000	30.00000	27.00000	32.50000	
2	33.50000	48.50000	47.50000	27.50000	
3	34.00000	40.00000	36.00000	31.50000	
S = 2 Q = 2					
R =	1	2	3	4	
C = 1	28.50000	33.50000	24.50000	34.50000	
2	27.00000	35.00000	21.00000	31.00000	
3	34.50000	34.00000	30.00000	44.00000	

DISTAR LONGITUDINAL DATA

ITPA: AUDITORY ASSOCIATION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	57.5504	110161.5	1	110161.5	N.S.
S (SEX)	1.4172	26.04167	1	26.04167	N.S.
Q ([redacted].)	1.0516	104.1667	1	104.1667	N.S.
C (Cont. Status)	.2997	40.68750	2	20.34375	N.S.
M (Measurement)	.0000	88.16667	1	88.16667	N.S.
SQ	.1855	18.37500	1	18.37500	N.S.
SC	36.7735	595.2708	2	297.6354	.05
QC	.6853	135.7708	2	67.88542	N.S.
SM	2.7778	1.041667	1	1.041667	N.S.
QM	.0000	-.4547474E-12	1	-.4547474E-12	N.S.
CM	9.6120	36.64583	2	18.32292	N.S.
SQC	.0817	16.18750	2	8.093750	N.S.
SQM	.0289	.3750000	1	.3750000	N.S.
SCM	.0341	1.895833	2	.9479167	N.S.
QCM	.1471	3.812500	2	1.906250	N.S.
R(SQC)		3566.000	36	99.05556	- -
SQCM	2.1439	55.56250	2	27.78125	N.S.
RM(SQC)		466.5000	36	12.95833	- -

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TABLE 46

DISTAR LONGITUDINAL DATA

ITPA: AUDITORY ASSOCIATION SCALED SCORE

CELL MEANS

S =	1	2			
	33.35417	34.39583			
Q =	1	2			
	34.91667	32.83333			
C =	1	2	3		
	33.36250	33.90625	34.65625		
M =	1	2			
	32.91667	34.83333			
Q =	1	2			
S = 1	33.95833	32.75000			
2	35.87500	32.91667			
C =	1	2	3		
S = 1	36.06250	31.56250	32.43750		
2	30.06250	36.25000	36.87500		
C =	1	2	3		
Q = 1	35.50000	35.06250	34.18750		
2	30.62500	32.75000	35.12500		
S = 1					
C =	1	2	3		
Q = 1	38.12500	31.75000	32.00000		
2	34.00000	31.37500	32.87500		
S = 2					
C =	1	2	3		
Q = 1	32.87500	36.37500	36.37500		
2	27.25000	34.12500	37.37500		
S = 1	Q = 1				
R =	1	2	3	4	
C = 1	30.00000	33.00000	40.00000	49.50000	
2	17.50000	30.50000	30.50000	48.50000	
3	28.00000	24.00000	42.00000	34.00000	
S = 1	Q = 2				
R =	1	2	3	4	
C = 1	34.50000	32.00000	39.50000	30.00000	
2	30.00000	37.50000	31.00000	27.00000	
3	39.00000	33.00000	38.50000	22.00000	
S = 2	Q = 1				
R =	1	2	3	4	
C = 1	38.50000	25.50000	31.50000	36.00000	
2	37.00000	46.50000	34.50000	35.50000	
3	36.00000	35.50000	37.00000	37.00000	
S = 2	Q = 2				
R =	1	2	3	4	
C = 1	32.00000	28.50000	23.00000	25.50000	
2	25.50000	46.00000	29.00000	35.00000	
3	30.00000	34.50000	33.00000	46.00000	

TABLE 47

DISTAR LONGITUDINAL DATA

ITPA: VERBAL EXPRESSION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	*02.5580	147266.7	1	147266.7	N.S.
S (SEX)	5.7600	54.00000	1	54.00000	N.S.
Q (I.Q.)	.5468	70.04167	1	70.04167	N.S.
C (Cont. Status)	.1185	45.08333	2	22.54167	N.S.
M (Measurement)	112.8906	301.0417	1	301.0417	N.S.
SQ	.0732	9.375000	1	9.375000	N.S.
SC	.5258	135.2500	2	67.62500	N.S.
QC	1.4847	380.3333	2	190.1667	N.S.
SM	90.2500	15.04167	1	15.04167	N.S.
QM	.1529	2.666667	1	2.666667	N.S.
CM	.4300	3.583333	2	1.791667	N.S.
SQC	1.0042	257.2500	2	128.6250	N.S.
SQM	.0096	.1666667	1	.1666667	N.S.
SCM	1.5131	53.08333	2	26.54167	N.S.
QCM	.2385	8.333333	2	4.166667	N.S.
R(SQC)		4611.000	36	128.0833	- -
SQCM	1.0056	35.08333	2	17.54167	N.S.
RM(SQC)		628.0000	36	17.44444	- -

TABLE 48

DISTAR LONGITUDINAL DATA

ITPA: VERGAL EXPRESSION SCALED SCORE

CELL MEANS

S =	1	2			
	39.91667	38.41667			
Q =	1	2			
	40.00083	38.31250			
C =	1	2	3		
	40.12500	38.56250	38.81250		
M =	1	2			
	37.39583	40.93750			
Q =	1	2			
S = 1	40.45833	39.37500			
2	39.58333	37.25000			
C =	1	2	3		
S = 1	42.18750	39.56250	38.00000		
2	38.06250	37.56250	39.62500		
C =	1	2	3		
Q = 1	42.06250	41.12500	36.87500		
2	38.18750	36.00000	40.75000		
S = 1					
C =	1	2	3		
Q = 1	44.87500	39.50000	37.00000		
2	39.50000	39.62500	39.00000		
S = 2					
C =	1	2	3		
Q = 1	39.25000	42.75000	36.75000		
2	36.87500	32.37500	42.50000		
S = 1 Q = 1					
R =	1	2	3	4	
C = 1	33.50000	28.00000	53.50000	64.50000	
2	35.50000	41.50000	38.50000	42.50000	
3	40.00000	30.50000	36.50000	41.00000	
S = 1 Q = 2					
R =	1	2	3	4	
C = 1	44.50000	36.00000	42.50000	35.00000	
2	39.50000	39.00000	27.50000	52.50000	
3	50.00000	35.50000	40.50000	30.00000	
S = 2 Q = 1					
R =	1	2	3	4	
C = 1	47.50000	27.50000	34.50000	47.50000	
2	42.00000	47.50000	43.50000	38.00000	
3	34.50000	31.00000	44.50000	37.00000	
S = 2 Q = 2					
R =	1	2	3	4	
C = 1	41.50000	36.50000	34.50000	35.00000	
2	32.00000	31.00000	30.50000	36.00000	
3	33.50000	34.50000	44.00000	38.00000	

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TABLE 49

DISTAR LONGITUDINAL DATA

ITPA: VISUAL ASSOCIATION SCALED SCORE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	40.1111	140760.2	1	140760.2	N.S.
S (SEX)	.1378	8.166667	1	8.166667	N.S.
Q (I.Q.)	.0131	1.500000	1	1.500000	N.S.
C (Cont. Status)	.1384	89.08333	2	44.54167	N.S.
M (Measurement)	.3600	54.00000	1	54.00000	N.S.
SQ	1.8907	216.0000	1	216.0000	N.S.
SC	1.6030	505.3333	2	252.6667	N.S.
QC	2.8175	643.7500	2	321.8750	N.S.
SM	.1322	2.666667	1	2.666667	N.S.
QM	5.2516	150.0000	1	150.0000	.05
CM	.1905	25.00000	2	12.50000	N.S.
SQC	1.3797	315.2500	2	157.6250	N.S.
SQM	.7061	20.16667	1	20.16667	N.S.
SCM	.9607	61.08333	2	30.54167	N.S.
QCM	2.2976	131.2500	2	65.62500	N.S.
R(SQC)		4112.750	36	114.2431	- -
SQCM	1.1131	63.58333	2	31.79167	N.S.
RM(SQC)		1028.250	36	28.56250	- -

TABLE 50

DISTAR LONGITUDINAL DATA

ITPA: VISUAL ASSOCIATION SCALED SCORE

CELL MEANS

S =	1	2			
	38.59333	38.00000			
Q =	1	2			
	38.16667	38.41667			
C =	1	2	3		
	37.00000	39.31250	38.56250		
M =	1	2			
	37.54167	39.04167			
Q =	1	2			
S = 1	35.95933	40.20833			
2	39.37500	36.62500			
C =	1	2	3		
S = 1	34.87500	42.68750	38.18750		
2	39.12500	35.93750	38.93750		
C =	1	2	3		
Q = 1	39.68750	39.81250	35.00000		
2	34.31250	38.81250	42.12500		
S = 1					
C =	1	2	3		
Q = 1	33.87500	41.62500	35.37500		
2	35.47500	43.75000	41.00000		
S = 2					
C =	1	2	3		
Q = 1	45.50000	38.00000	34.62500		
2	32.75000	33.87500	43.25000		
S = 1 Q = 1					
R =	1	2	3	4	
C = 1	42.00000	26.00000	31.00000	36.50000	
2	38.00000	42.00000	45.50000	41.00000	
3	33.50000	48.50000	21.50000	38.00000	
S = 1 Q = 2					
R =	1	2	3	4	
C = 1	38.00000	32.00000	42.50000	31.00000	
2	32.50000	58.00000	39.50000	45.00000	
3	41.00000	43.50000	42.50000	37.00000	
S = 2 Q = 1					
R =	1	2	3	4	
C = 1	62.50000	36.50000	42.00000	41.00000	
2	37.50000	40.00000	36.50000	38.00000	
3	39.00000	19.00000	30.50000	44.00000	
S = 2 Q = 2					
R =	1	2	3	4	
C = 1	36.50000	35.00000	27.00000	32.50000	
2	33.00000	37.00000	32.00000	33.00000	
3	54.50000	45.00000	38.50000	37.00000	

DISTAR LONGITUDINAL DATA

SPENCER MEMORY FOR SENTENCES TEST

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	8.7025	580.1667	1	580.1667	N.S.
S (SEX)	25.0000	1.041667	1	1.041667	N.S.
Q (I.Q.)	9.5522	66.66667	1	66.66667	.01
C (Cont. Status)	1.7718	8.895833	2	4.447917	N.S.
M (Measurement)	9.0000	9.375000	1	9.375000	N.S.
SQ	.0060	.4166667E-01	1	.4166667E-01	N.S.
SC	1.2486	33.27083	2	16.63542	N.S.
QC	.3597	5.020833	2	2.510417	N.S.
SM	.0000	-.5685342E-13	1	-5685342E-13	N.S.
QM	.7463	1.041667	1	1.041667	N.S.
CM	14.0769	3.812500	2	1.906250	N.S.
SQC	1.9090	26.64583	2	13.32292	N.S.
SQM	5.8507	8.166667	1	8.166667	.05
SCM	.4981	2.687500	2	1.343750	N.S.
QCM	.9070	.2708333	2	.1354167	N.S.
R(SQC)		251.2500	36	6.979167	- -
SQCM	1.9328	5.395833	2	2.697917	N.S.
RM(SQC)		50.25000	36	1.395833	- -

Proger

TABLE 52

DISTAR LONGITUDINAL DATA

SPENCER MEMORY FOR SENTENCES TEST

CELL MEANS

S =		1	2			
		2.56250	2.35417			
Q =		1	2			
		3.29167	1.62500			
C =		1	2			
		2.62500	2.03125	2.71875		
M =		1	2			
		2.14583	2.77083			
Q =		1	2			
S =	1	3.41667	1.70833			
	2	3.16667	1.54167			
C =		1	2	3		
S =	1	3.25000	1.31250	3.12500		
	2	2.00000	2.75000	2.31250		
C =		1	2	3		
Q =	1	3.31250	3.18750	3.37500		
	2	1.33750	.87500	2.06250		
S = 1						
C =		1	2	3		
Q =	1	4.25000	1.75000	4.25000		
	2	2.25000	.87500	2.00000		
S = 2						
C =		1	2	3		
Q =	1	2.37500	4.62500	2.50000		
	2	1.62500	.87500	2.12500		
S = 1		Q = 1				
R =		1	2	3	4	
C =	1	4.50000	3.00000	4.50000	5.00000	
	2	2.00000	3.00000	2.00000	.00000	
	3	3.00000	3.00000	6.50000	4.50000	
S = 1		Q = 2				
R =		1	2	3	4	
C =	1	1.50000	.00000	1.50000	6.00000	
	2	1.00000	1.50000	.00000	1.00000	
	3	6.00000	2.00000	.00000	.00000	
S = 2		Q = 1				
R =		1	2	3	4	
C =	1	.50000	1.00000	4.50000	3.50000	
	2	3.50000	3.50000	0.00000	2.50000	
	3	3.50000	5.00000	1.00000	.50000	
S = 2		Q = 2				
R =		1	2	3	4	
C =	1	1.50000	2.50000	2.00000	.50000	
	2	1.50000	.00000	3.00000	.00000	
	3	.50000	1.50000	2.00000	4.50000	

DISTAR LONGITUDINAL DATA

PEABODY PICTURE VOCABULARY TEST MENTAL AGE

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	44.7848	425467.5	1	425467.5	N.S.
S (SEX)	.0300	15.84375	1	15.84375	N.S.
Q (I.Q.)	11.7942	9500.260	1	9500.260	.01
C (Cont. Status)	2.4598	3722.021	2	1861.010	N.S.
M (Measurement)	5.5918	420.8437	1	420.8437	N.S.
SQ	.6547	527.3438	1	527.3438	N.S.
SC	1.8511	1533.062	2	766.5312	N.S.
QC	.9393	1513.146	2	756.5729	N.S.
SM	1.4470	71.76042	1	71.76042	N.S.
QM	1.3097	75.26042	1	75.26042	N.S.
CM	.0039	.4375000	2	.2187500	N.S.
SQC	.5141	828.1875	2	414.0937	N.S.
SQM	.8631	49.59375	1	49.59375	N.S.
SCM	2.6549	60.89583	2	30.44792	N.S.
QCM	.9845	113.1458	2	56.57292	N.S.
R(SQC)		28998.12	36	805.5035	- -
SQCM	.1996	22.93750	2	11.46875	N.S.
RM(SQC)		2068.625	36	57.46181	- -

TABLE 54

DISTAR LONGITUDINAL DATA

PEABODY PICTURE VOCABULARY TEST MENTAL AGE

CELL MEANS

	S =	1	2		
		56.16667	66.97917		
	Q =	1	2		
		76.22083	56.62500		
	C =	1	2	3	
		66.71875	58.87500	74.12500	
	M =	1	2		
		64.47917	68.66667		
	Q =	1	2		
S = 1		78.45833	53.87500		
2		74.58333	59.37500		
	C =	1	2	3	
S = 1		67.81250	53.00000	77.68750	
2		65.62500	64.75000	70.56250	
	C =	1	2	3	
Q = 1		71.12500	72.37500	86.06250	
2		62.31250	45.37500	62.18750	
S = 1					
	C =	1	2	3	
Q = 1		76.00000	64.75000	94.62500	
2		59.62500	41.25000	60.75000	
S = 2					
	C =	1	2	3	
Q = 1		66.25000	80.00000	77.50000	
2		55.00000	49.50000	63.62500	
S = 1	Q = 1				
	R =	1	2	3	4
C = 1		55.00000	69.00000	87.00000	62.00000
2		75.50000	83.00000	42.00000	57.00000
3		79.00000	89.00000	97.00000	113.50000
S = 1	Q = 2				
	R =	1	2	3	4
C = 1		63.00000	32.50000	49.00000	95.00000
2		51.50000	33.00000	33.00000	47.50000
3		98.00000	60.00000	44.00000	41.00000
S = 2	Q = 1				
	R =	1	2	3	4
C = 1		34.00000	44.00000	100.50000	86.50000
2		65.00000	94.50000	82.50000	75.00000
3		88.00000	66.50000	63.50000	72.00000
S = 2	Q = 2				
	R =	1	2	3	4
C = 1		70.00000	64.50000	34.00000	86.50000
2		67.50000	38.50000	46.50000	75.50000
3		39.50000	79.00000	60.00000	68.00000

APPENDIX C

TABLES FOR DISTAR INTENSIVE STUDY: INTRA - YEAR FINDINGS SEPARATELY FOR EACH OF 7 PERIODS

TABLE 55

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 1

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	51.2966	52668.75	1	52668.75	N.S.
S (SEX)	1.8595	75.00000	1	75.00000	N.S.
Q (I.Q.)	3.8250	1026.750	1	1026.750	N.S.
C (Cont. Status)	.2453	326.6250	2	163.3125	N.S.
SQ	.1503	40.44444	1	40.33333	N.S.
SC	4.9184	819.1250	2	409.5625	N.S.
QC	2.4799	1331.375	2	665.6875	N.S.
SQC	.3102	166.5417	2	83.27083	N.S.
R(SQC)		9663.500	36	268.4306	- -

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Proger

TABLE 56

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 1

CELL MEANS

S = 1	C = 1	34.37500	31.87500		
	C = 2	27.75000	28.50000		
	C = 3	30.06250	32.87500	35.37500	
S = 2	C = 1	29.31667	28.83333		
	C = 2	35.59333	28.16667		
	C = 3	29.22500	30.12500	37.37500	
	C = 1	30.50000	35.62500	33.50000	
	C = 2	27.25000	30.87500	27.12500	
	C = 3	32.37500	28.87500	27.75000	
S = 1	C = 1	27.75000	36.75000	31.25000	
	C = 2	31.50000	23.50000	31.50000	
S = 2	C = 1	25.75000	45.00000	30.00000	
	C = 2	34.25000	26.25000	24.00000	
S = 1 Q = 1	R = 1	39.00000	14.00000	37.00000	15.00000
	R = 2	22.00000	74.00000	37.00000	14.00000
	R = 3	34.00000	30.00000	74.00000	74.00000
S = 1 Q = 2	R = 1	32.00000	15.00000	40.00000	40.00000
	R = 2	26.00000	15.00000	15.00000	37.00000
	R = 3	43.00000	53.00000	15.00000	15.00000
S = 2 Q = 1	R = 1	16.00000	14.00000	47.00000	34.00000
	R = 2	34.00000	48.00000	40.00000	47.00000
	R = 3	35.00000	22.00000	40.00000	34.00000
S = 2 Q = 2	R = 1	25.00000	48.00000	14.00000	49.00000
	R = 2	23.00000	15.00000	37.00000	14.00000
	R = 3	15.00000	23.00000	24.00000	35.00000

TABLE 57

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 1

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	103.8196	47376.33	1	47376.33	N.S.
S (SEX)	16.0000	5.333333	1	5.333333	N.S.
Q (I.Q.)	2.2167	456.3333	1	456.3333	N.S.
C (Cont. Status)	.0924	89.54167	2	44.77083	N.S.
SQ	.0016	.3333333	1	.3333333	N.S.
SC	5.4360	674.2917	2	337.1458	N.S.
QC	2.3530	968.7917	2	484.3958	N.S.
SQC	.3013	124.0417	2	62.02083	N.S.
R(SQC)		7411.000	36	205.8611	- -

Proger

TABLE 58

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 1

CELL MEANS

S =	1	1	31.75000	31.08333	
Q =		2	34.50000	28.33333	
C =		1	29.62500	31.58750	32.93750
Q =		1	34.91667	28.29333	
S =	1	2	34.08333	28.08333	
C =		1	29.37500	27.75000	38.12500
S =	1	2	29.87500	35.75000	27.75000
C =		1	26.37500	38.37500	35.75000
Q =	1	2	32.37500	25.00000	27.12500
S =	1				
C =		1	27.25000	32.25000	43.25000
Q =	1	2	31.50000	23.25000	31.00000
S =	2				
C =		1	25.50000	44.50000	32.25000
Q =	1	2	34.25000	26.75000	27.25000
S =	1	Q =	1		
R =		1	2	3	4
C =	1	39.00000	14.00000	41.00000	15.00000
	2	23.00000	56.00000	37.00000	14.00000
	3	31.00000	39.00000	58.00000	56.00000
S =	1	Q =	2		
R =		1	2	3	4
C =	1	22.00000	15.00000	40.00000	45.00000
	2	26.00000	15.00000	14.00000	37.00000
	3	41.00000	53.00000	15.00000	15.00000
S =	2	Q =	1		
R =		1	2	3	4
C =	1	15.00000	14.00000	41.00000	32.00000
	2	33.00000	58.00000	50.00000	45.00000
	3	20.00000	22.00000	47.00000	20.00000
S =	2	Q =	2		
R =		1	2	3	4
C =	1	25.00000	48.00000	14.00000	49.00000
	2	23.00000	15.00000	25.00000	14.00000
	3	15.00000	28.00000	25.00000	39.00000

TABLE 59

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 2

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	44.7667	86190.75	1	86190.75	N.S.
S (SEX)	.4815	96.33333	1	96.33333	N.S.
Q (I.Q.)	5.1098	1925.333	1	1925.333	.05
C (Cont. Status)	.0995	142.6250	2	71.31250	N.S.
SQ	.5310	200.0833	1	200.0833	N.S.
SC	3.4773	627.7917	2	313.8958	N.S.
QC	1.9030	1434.042	2	717.0208	N.S.
SQC	.2396	180.5417	2	90.27083	N.S.
R(SQC)		13564.50	36	376.7917	- -

Proger

TABLE 60

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 2

CELL MEANS

		1	2	3	4
S =	Q =	43.79167	40.95833		
	C =	48.70833	36.04167		
	O =	41.12500	42.16750	44.31250	
S = 1	C = 1	52.16667	35.41667		
	C = 2	45.25000	36.66667		
S = 2	C = 1	40.37500	40.37500	50.62500	
	C = 2	39.87500	45.00000	38.00000	
O = 1	C = 1	38.75000	52.37500	55.00000	
	C = 2	41.50000	37.00000	33.62500	
S = 1, Q = 1	C = 1	41.00000	49.75000	55.75000	
	C = 2	39.75000	31.00000	[illegible]	
S = 2, Q = 2	C = 1	36.50000	55.00000	44.25000	
	C = 2	43.25000	36.00000	31.75000	
S = 1, R = 1, O = 1	C = 1	53.00000	26.00000	[illegible]	26.00000
	C = 2	35.00000	87.00000	51.00000	26.00000
	C = 3	35.00000	63.00000	[illegible]	47.00000
S = 1, R = 1, O = 2	C = 1	35.00000	10.00000	53.00000	61.00000
	C = 2	32.00000	22.00000	13.00000	51.00000
	C = 3	57.00000	65.00000	10.00000	10.00000
S = 2, R = 2, O = 1	C = 1	19.00000	26.00000	57.00000	44.00000
	C = 2	44.00000	54.00000	61.00000	61.00000
	C = 3	43.00000	36.00000	62.00000	36.00000
S = 2, R = 2, O = 2	C = 1	[illegible]	51.00000	26.00000	61.00000
	C = 2	31.00000	[illegible]	65.00000	22.00000
	C = 3	[illegible]	[illegible]	31.00000	43.00000

TABLE 61

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 2

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	69.5834	83500.08	1	83500.08	N.S.
S (SEX)	.2500	10.08333	1	10.08333	N.S.
Q (I.Q.)	4.1997	1200.000	1	1200.000	.05
C (Cont. Status)	.0542	52.16667	2	26.08333	N.S.
SQ	.1412	40.33333	1	40.33333	N.S.
SC	3.2500	470.1667	2	235.0833	N.S.
QC	1.6834	962.0000	2	481.0000	N.S.
SQC	.2531	144.6667	2	72.33333	N.S.
R(SQC)		10286.50	36	285.7361	- -

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TABLE 62

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 2

CELL MEANS

S =		1	2		
		42.15567	41.25000		
Q =		1	2		
		46.70833	38.70833		
C =		1	2	3	
		40.25000	42.00000	42.25000	
Q =		1	2		
S =	1	43.91333	36.25000		
	2	46.33333	37.16667		
C =		1	2	3	
S =	1	40.25000	39.50000	43.25000	
	2	40.25000	45.25000	37.25000	
C =		1	2	3	
Q =	1	39.00000	49.87500	51.25000	
	2	41.50000	35.37500	37.25000	
S = 1					
C =		1	2	3	
Q =	1	40.75000	45.25000	58.25000	
	2	39.75000	37.75000	35.25000	
S = 2					
C =		1	2	3	
Q =	1	37.25000	54.50000	44.25000	
	2	43.25000	37.00000	31.25000	
S = 1 Q = 1					
R =		1	2	3	4
C =	1	53.10300	26.00000	56.60000	28.00000
	2	35.00000	68.00000	51.00000	26.00000
	3	42.00000	53.00000	64.00000	69.00000
S = 1 Q = 2					
R =		1	2	3	4
C =	1	75.00000	10.00000	53.00000	61.00000
	2	32.00000	27.00000	25.00000	51.00000
	3	55.00000	65.00000	10.00000	10.00000
S = 2 Q = 1					
R =		1	2	3	4
C =	1	25.00000	26.00000	56.00000	42.00000
	2	42.00000	54.00000	61.00000	61.00000
	3	78.00000	36.00000	61.00000	42.00000
S = 2 Q = 2					
R =		1	2	3	4
C =	1	32.00000	54.00000	25.00000	61.00000
	2	74.00000	27.00000	51.00000	22.00000
	3	23.00000	30.00000	34.00000	38.00000

TABLE 63

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 3

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	F LEVEL
MEAN	29.1988	121002.1	1	121002.1	N.S.
S (SEX)	.2165	184.0833	1	184.0833	N.S.
Q (I.Q.)	7.5358	4144.083	1	4144.083	.01
C (Cont. Status)	.0804	143.2917	2	71.64583	N.S.
SQ	1.5458	850.0833	1	850.0833	N.S.
SC	1.7114	707.2917	2	353.6458	N.S.
QC	1.6210	1782.792	2	891.3958	N.S.
SQC	.3758	413.2917	2	206.6458	N.S.
R(SQC)		19797.00	36	549.9167	- -

TABLE 64

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 3

CELL MEANS

S =	1	52.16667	48.25000		
Q =	1	59.50000	40.91667		
C =	1	47.33750	50.56250	52.12500	
Q =	1	65.66667	38.66667		
S = 1	2	53.33333	43.16667		
C =	1	47.50000	49.50000	59.50000	
S = 1	2	49.37500	51.62500	48.75000	
C =	1	43.00000	61.75000	67.75000	
Q = 1	2	40.37500	39.37500	36.50000	
S = 1					
C =	1	52.00000	61.75000	83.25000	
Q = 1	2	43.00000	37.25000	35.75000	
S = 2					
C =	1	56.00000	61.75000	52.25000	
Q = 1	2	50.75000	41.50000	37.25000	

S = 1 Q = 1						
R =	1					
C = 1	2	62.00000	76.00000	70.00000	40.00000	
	3	42.00000	113.00000	56.00000	30.00000	
	4	45.00000	62.00000	117.00000	113.00000	
S = 1 Q = 2						
R =	1					
C = 1	2	42.00000	2.00000	61.00000	67.00000	
	3	33.00000	20.00000	25.00000	20.00000	
	4	70.00000	69.00000	2.00000	2.00000	
S = 2 Q = 1						
R =	1					
C = 1	2	35.00000	36.00000	70.00000	53.00000	
	3	37.00000	60.00000	67.00000	47.00000	
	4	40.00000	49.00000	66.00000	45.00000	
S = 2 Q = 2						
R =	1					
C = 1	2	39.00000	60.00000	37.00000	27.00000	
	3	43.00000	20.00000	8.00000	25.00000	
	4	21.00000	36.00000	43.00000	44.00000	

TABLE 65

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 3

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	34.3305	121404.1	1	121404.1	N.S.
S (SEX)	.1797	126.7500	1	126.7500	N.S.
Q (I.Q.)	6.5574	3536.333	1	3536.333	.05
C (Cont. Status)	.1253	197.0417	2	98.52083	N.S.
SQ	1.3079	705.3333	1	705.3333	N.S.
SC	2.2251	919.6250	2	459.8125	N.S.
QC	1.4584	1573.042	2	786.5208	N.S.
SQC	.3832	413.2917	2	206.6458	N.S.
R(SQC)		19414.50	36	539.2917	- -

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TABLE 66

DISTAR LONGITUDINAL DATA

DISTAR BOOK P NUMBER: EFFICD 3

CELL MEANS

S =		1	2		
	1	51.51667	48.66667		
S =		1	2		
	1	58.37500	41.70833		
C =		1	2	3	
	1	47.43750	51.00000	51.03750	
Q =		1	2		
S = 1	1	64.33333	39.50000		
	2	53.41667	43.91667		
C =		1	2	3	
S = 1	1	46.12500	49.87500	59.75000	
	2	48.75000	53.12500	44.12500	
C =		1	2	3	
Q = 1	1	49.25000	59.62500	57.75000	
	2	45.62500	43.37500	36.12500	
S = 1					
C =		1	2	3	
Q = 1	1	51.75000	58.25000	57.00000	
	2	40.50000	41.50000	36.50000	
S = 2					
C =		1	2	3	
Q = 1	1	46.75000	61.00000	52.50000	
	2	50.75000	45.25000	35.75000	
S = 1 Q = 1					
R =		1	2	3	4
C = 1	1	52.00000	36.00000	60.00000	40.00000
	2	27.00000	109.00000	61.00000	36.00000
	3	52.00000	62.00000	100.00000	109.00000
S = 1 Q = 2					
R =		1	2	3	4
C = 1	1	27.00000	2.00000	56.00000	67.00000
	2	39.00000	34.00000	32.00000	61.00000
	3	63.00000	74.00000	2.00000	2.00000
S = 2 Q = 1					
R =		1	2	3	4
C = 1	1	32.00000	30.00000	63.00000	50.00000
	2	50.00000	60.00000	57.00000	67.00000
	3	49.00000	49.00000	67.00000	52.00000
S = 2 Q = 2					
R =		1	2	3	4
C = 1	1	30.00000	60.00000	57.00000	67.00000
	2	44.00000	34.00000	32.00000	36.00000
	3	21.00000	36.00000	42.00000	42.00000

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 4

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	LEVEL
MEAN	44.7246	171482.5	1	171482.5	N.S.
S (SEX)	.7272	402.5208	1	402.5208	N.S.
Q (I.Q.)	8.4540	3834.187	1	3834.187	.01
C (Cont. Status)	.1349	148.1667	2	74.08333	N.S.
SQ	1.2205	553.5208	1	553.5208	N.S.
SC	3.3229	655.1667	2	327.5833	N.S.
QC	1.2110	1098.500	2	549.2500	N.S.
SQC	.2174	197.1667	2	98.58333	N.S.
R(SQC)		16327.25	36	453.5347	- -

Proger

TABLE 68

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 4

CELL MEANS

	S =	1	2		
		62.66667	56.87500		
	Q =	1	2		
		68.70833	50.83333		
	C =	1	2	3	
		58.06250	59.06250	62.18750	
	Q =	1	2		
S =	1	75.00000	50.33333		
	2	62.41667	51.33333		
	C =	1	2	3	
S =	1	59.62500	58.25000	70.12500	
	2	56.50000	59.87500	54.25000	
	C =	1	2	3	
Q =	1	60.37500	70.12500	75.62500	
	2	55.75000	48.00000	48.75000	
	S = 1	C =			
		1	2	3	
Q =	1	64.50000	70.75000	89.75000	
	2	54.75000	45.75000	50.50000	
	S = 2	C =			
		1	2	3	
Q =	1	55.25000	69.50000	61.50000	
	2	56.75000	50.25000	47.00000	
	S = 1	Q = 1			
	R =	1	2	3	4
C =	1	73.00000	50.00000	79.00000	56.00000
	2	49.00000	116.00000	68.00000	50.00000
	3	54.00000	73.00000	116.00000	116.00000
	S = 1	Q = 2			
	R =	1	2	3	4
C =	1	49.00000	22.00000	74.00000	74.00000
	2	46.00000	36.00000	33.00000	68.00000
	3	79.00000	79.00000	22.00000	22.00000
	S = 2	Q = 1			
	R =	1	2	3	4
C =	1	33.00000	50.00000	79.00000	63.00000
	2	63.00000	67.00000	74.00000	74.00000
	3	57.00000	59.00000	76.00000	54.00000
	S = 2	Q = 2			
	R =	1	2	3	4
C =	1	46.00000	67.00000	40.00000	74.00000
	2	54.00000	36.00000	79.00000	32.00000
	3	35.00000	42.00000	54.00000	57.00000

TABLE 69

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 4

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	59.1336	172320.3	1	172320.3	N.S.
S (SEX)	.4066	161.3333	1	161.3333	N.S.
Q (I.Q.)	6.7575	2914.083	1	2914.083	.05
C (Cont. Status)	.0989	85.16667	2	42.58333	N.S.
SQ	.9200	396.7500	1	396.7500	N.S.
SC	4.7474	833.1667	2	416.5833	N.S.
QC	.9985	861.1667	2	430.5833	N.S.
SQC	.2035	175.5000	2	87.75000	N.S.
R(SQC)		15524.50	36	431.2361	- -

TABLE 70

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 4

CELL MEANS

S =		1	2		
		61.75000	58.08333		
Q =		1	2		
		67.70833	52.12500		
C =		1	2	3	
		58.37500	59.75000	61.62500	
Q =		1	2		
S =	1	72.41667	51.08333		
	2	63.00000	53.16667		
C =		1	2	3	
S =	1	58.25000	57.75000	69.25000	
	2	58.50000	61.75000	54.00000	
C =		1	2	3	
Q =	1	61.00000	67.50000	74.62500	
	2	55.75000	52.00000	48.62500	
S =	1				
C =		1	2	3	
Q =	1	64.50000	65.75000	87.00000	
	2	52.00000	49.75000	51.50000	
S =	2				
C =		1	2	3	
Q =	1	57.50000	69.25000	62.25000	
	2	59.50000	54.25000	45.75000	
S =	1	Q = 1			
R =		1	2	3	4
C =	1	73.00000	50.00000	79.00000	56.00000
	2	33.00000	107.00000	73.00000	50.00000
	3	61.00000	73.00000	107.00000	107.00000
S =	1	Q = 2			
R =		1	2	3	4
C =	1	33.00000	22.00000	79.00000	74.00000
	2	46.00000	41.00000	39.00000	73.00000
	3	79.00000	83.00000	22.00000	22.00000
S =	2	Q = 1			
R =		1	2	3	4
C =	1	39.00000	50.00000	79.00000	62.00000
	2	62.00000	67.00000	74.00000	74.00000
	3	50.00000	59.00000	79.00000	61.00000
S =	2	Q = 2			
R =		1	2	3	4
C =	1	46.00000	67.00000	51.00000	74.00000
	2	56.00000	41.00000	83.00000	37.00000
	3	35.00000	42.00000	56.00000	50.00000

TABLE 71

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 4

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	258.8770	113393.5	1	113393.5	.05
S (SEX)	.4235	35.02083	1	35.02083	N.S.
Q (I.Q.)	2.2341	438.0208	1	438.0208	N.S.
C (Cont. Status)	.8834	746.1667	2	373.0833	N.S.
SQ	.4217	82.68750	1	82.68750	N.S.
SC	.8354	377.1667	2	188.5833	N.S.
QC	2.1541	844.6667	2	422.3333	N.S.
(SQC)	1.1514	451.5000	2	225.7500	N.S.
		7058.250	36	196.0625	

TABLE 72

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER : PERIOD 4

CELL MEANS

S =	1	2			
	47.75000	49.45833			
Q =	1	2			
	51.62500	45.58333			
C =	1	2	3		
	53.18750	49.06250	43.56250		
Q =	1	2			
S = 1	52.08333	43.41667			
2	51.16667	47.75000			
C =	1	2	3		
S = 1	54.12500	44.25000	44.87500		
2	52.25000	53.87500	42.25000		
C =	1	2	3		
Q = 1	50.87500	57.00000	47.00000		
2	55.50000	41.12500	40.12500		
S = 1					
C =	1	2	3		
Q = 1	56.00000	49.25000	51.00000		
2	52.25000	39.25000	38.75000		
S = 2					
C =	1	2	3		
Q = 1	45.75000	64.75000	43.00000		
2	58.75000	43.00000	41.50000		
S = 1	Q = 1				
R =	1	2	3	4	
C = 1	64.00000	44.00000	60.00000	56.00000	
2	48.00000	50.00000	55.00000	44.00000	
3	40.00000	64.00000	50.00000	50.00000	
S = 1	Q = 2				
R =	1	2	3	4	
C = 1	48.00000	18.00000	70.00000	73.00000	
2	45.00000	25.00000	32.00000	55.00000	
3	60.00000	59.00000	18.00000	18.00000	
S = 2	Q = 1				
R =	1	2	3	4	
C = 1	32.00000	44.00000	60.00000	47.00000	
2	47.00000	66.00000	73.00000	73.00000	
3	39.00000	52.00000	41.00000	40.00000	
S = 2	Q = 2				
R =	1	2	3	4	
C = 1	45.00000	66.00000	51.00000	71.00000	
2	51.00000	25.00000	59.00000	37.00000	
3	35.00000	41.00000	51.00000	39.00000	

TABLE 73

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 4

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	53.7910	154246.7	1	154246.7	N.S.
S (SEX)	.1023	82.68750	1	82.68750	N.S.
Q (I.Q.)	7.0126	2867.521	1	2867.521	.05
C (Cont. Status)	.1933	396.5000	2	198.2500	N.S.
SQ	1.9773	808.5208	1	808.5208	N.S.
SC	.4189	360.5000	2	180.2500	N.S.
QC	2.5081	2051.167	2	1025.583	N.S.
SQC	1.0524	860.6667	2	430.3333	N.S.
R(SQC)		14720.75	36	408.9097	--

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TABLE 74

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 4

CELL MEANS

S =	1	2			
	59.00000	55.37500			
Q =	1	2			
	64.41667	48.95833			
C =	1	2	3		
	52.81250	57.56250	59.68750		
Q =	1	2			
S = 1	69.83333	46.16667			
2	59.00000	51.75000			
C =	1	2	3		
S = 1	52.12500	57.00000	64.87500		
2	53.50000	56.12500	54.50000		
C =	1	2	3		
Q = 1	53.50000	63.62500	78.12500		
2	52.12500	51.50000	43.25000		
S = 1					
C =	1	2	3		
Q = 1	55.00000	62.50000	81.00000		
2	48.25000	51.50000	38.75000		
S = 2					
C =	1	2	3		
Q = 1	51.00000	64.75000	61.25000		
2	56.00000	51.50000	47.75000		
S = 1 Q = 1					
R =	1	2	3	4	
C = 1	64.00000	44.00000	60.00000	56.00000	
2	33.00000	110.00000	55.00000	44.00000	
3	69.00000	84.00000	113.00000	110.00000	
S = 1 Q = 2					
R =	1	2	3	4	
C = 1	32.00000	18.00000	70.00000	73.00000	
2	45.00000	53.00000	53.00000	55.00000	
3	60.00000	59.00000	18.00000	18.00000	
S = 2 Q = 1					
R =	1	2	3	4	
C = 1	53.00000	44.00000	60.00000	47.00000	
2	47.00000	66.00000	73.00000	73.00000	
3	53.00000	52.00000	74.00000	62.00000	
S = 2 Q = 2					
R =	1	2	3	4	
C = 1	45.00000	66.00000	40.00000	73.00000	
2	52.00000	53.00000	66.00000	32.00000	
3	35.00000	41.00000	52.00000	57.00000	

TABLE 75

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 5

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	50.3453	222905.0	1	222905.0	N.S.
S (SEX)	1.0789	540.0208	1	540.0208	N.S.
Q (I.Q.)	10.0595	4427.521	1	4427.521	.01
C (Cont. Status)	.0734	123.0417	2	61.52083	N.S.
SQ	1.1372	500.5208	1	500.5208	N.S.
SC	3.0322	627.7917	2	313.8958	N.S.
QC	1.9032	1675.292	2	837.6458	N.S.
SQC	.2352	207.0417	2	103.5208	N.S.
R(SQC)		15844.75	36	440.1319	- -

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TABLE 76

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 5

CELL MEANS

S =		1	2		
	1	71.50000	64.73167		
Q =		1	2		
	1	77.75001	58.54167		
C =		1	2	3	
	1	65.68750	67.37500	70.37500	
Q =		1			
S = 1	1	84.33333	58.66667		
	2	71.16667	58.41667		
C =		1	2	3	
S = 1	1	63.37500	67.00000	78.62500	
	2	64.00000	67.75000	52.12500	
C =		1	2	3	
Q = 1	1	68.37500	78.62500	36.25000	
	2	65.00000	56.12500	54.50000	
S = 1					
C =		1	2	3	
Q = 1	1	73.25000	79.25000	100.50000	
	2	64.00000	54.75000	36.75000	
S = 2					
C =		1	2	3	
Q = 1	1	63.50000	78.00000	72.00000	
	2	65.50000	57.50000	52.25000	
S = 1 Q = 1					
R =		1	2	3	4
C = 1	1	84.00000	55.00000	53.00000	68.00000
	2	56.00000	125.00000	81.00000	55.00000
	3	55.00000	87.00000	125.00000	125.00000
S = 1 Q = 2					
R =		1	2	3	4
C = 1	1	55.00000	32.00000	87.00000	83.00000
	2	54.00000	44.00000	50.00000	81.00000
	3	83.00000	60.00000	39.00000	32.00000
S = 2 Q = 1					
R =		1	2	3	4
C = 1	1	40.00000	55.00000	87.00000	76.00000
	2	76.00000	70.00000	33.00000	83.00000
	3	63.00000	73.00000	32.00000	65.00000
S = 2 Q = 2					
R =		1	2	3	4
C = 1	1	54.00000	70.00000	35.00000	83.00000
	2	55.00000	44.00000	50.00000	80.00000
	3	61.00000	39.00000	65.00000	63.00000

Proger

TABLE 77

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 5

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	69.7542	226737.5	1	226737.5	N.S.
S (SEX)	.9370	305.0208	1	305.0208	N.S.
Q (I.Q.)	6.4579	3250.521	1	3250.521	.05
C (Cont. Status)	.0433	49.29167	2	24.64583	N.S.
SQ	.6467	325.5208	1	325.5208	N.S.
SC	9.7960	1134.292	2	567.1458	N.S.
QC	1.1312	1138.792	2	569.3958	N.S.
SQC	.1150	115.7917	2	57.89583	N.S.
R(SQC)		18120.25	36	503.3403	- -

Proger

TABLE 78

DISTAR LONGITUDINAL DATA

DISTAR BOOK BO NUMBER: PERIOD 5

CELL MEANS

S =	1	71.25000	66.20833		
Q =	1	76.95833	60.50000		
C =	1	67.75000	68.31250	70.12500	
Q =	1	82.08333	60.41667		
S = 1	2	71.83333	60.58333		
C =	1	68.12500	66.25000	79.37500	
S = 1	2	67.37500	70.37500	60.87500	
C =	1	70.37500	75.87500	84.62500	
Q = 1	2	65.12500	60.75000	55.62500	
S = 1					
C =	1	74.75000	74.25000	97.25000	
Q = 1	2	61.50000	58.25000	61.50000	
S = 2					
C =	1	66.00000	77.50000	72.00000	
Q = 1	2	68.75000	63.25000	49.75000	
S = 1	Q = 1				
C =	1	87.00000	55.00000	92.00000	65.00000
R = 1	2	40.00000	116.00000	86.00000	55.00000
	3	70.00000	87.00000	116.00000	116.00000
S = 1	Q = 2				
C =	1	40.00000	31.00000	92.00000	83.00000
R = 1	2	54.00000	48.00000	45.00000	86.00000
	3	92.00000	92.00000	31.00000	31.00000
S = 2	Q = 1				
C =	1	45.00000	55.00000	92.00000	72.00000
R = 1	2	72.00000	72.00000	83.00000	83.00000
	3	55.00000	73.00000	90.00000	70.00000
S = 2	Q = 2				
C =	1	54.00000	72.00000	66.00000	83.00000
R = 1	2	69.00000	48.00000	92.00000	44.00000
	3	41.00000	34.00000	69.00000	55.00000

TABLE 79

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 5

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	91.3838	184140.2	1	184140.2	N.S.
S (SEX)	.2640	581.0208	1	581.0208	N.S.
Q (I.Q.)	4.1052	2015.021	1	2015.021	.05
C (Cont. Status)	.0126	24.00000	2	12.00000	N.S.
SQ	4.4832	2200.521	1	2200.521	.05
SC	1.0515	928.6667	2	454.3333	N.S.
QC	1.9458	1910.167	2	955.0833	N.S.
SQC	.8996	883.1667	2	441.5833	N.S.
R(SQC)		17670.25	36	490.8403	- -

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TABLE 80

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 5

CELL MEANS

S =		1	2		
		55.41667	58.45833		
Q =		1	2		
		53.41667	55.45833		
C =		1	2	3	
		62.43750	62.43750	60.93750	
Q =		1	2		
S =	1	78.66667	52.16667		
	2	53.16667	58.75000		
C =		1	2	3	
S =	1	64.00000	61.75000	70.50000	
	2	60.87500	63.12500	51.37500	
C =		1	2	3	
Q =	1	60.00000	73.12500	72.12500	
	2	64.37500	51.75000	49.75000	
S = 1					
C =		1	2	3	
Q =	1	67.00000	74.75000	74.25000	
	2	61.00000	48.75000	46.75000	
S = 2					
C =		1	2	3	
Q =	1	53.00000	71.50000	70.00000	
	2	68.75000	54.75000	52.75000	
S = 1 Q = 1					
R =		1	2	3	4
C =	1	78.00000	49.00000	73.00000	68.00000
	2	56.00000	126.00000	64.00000	40.00000
	3	47.00000	78.00000	126.00000	126.00000
S = 1 Q = 2					
R =		1	2	3	4
C =	1	56.00000	23.00000	83.00000	82.00000
	2	54.00000	32.00000	41.00000	68.00000
	3	73.00000	68.00000	23.00000	23.00000
S = 2 Q = 1					
R =		1	2	3	4
C =	1	41.00000	49.00000	73.00000	40.00000
	2	49.00000	73.00000	82.00000	83.00000
	3	47.00000	57.00000	49.00000	47.00000
S = 2 Q = 2					
R =		1	2	3	4
C =	1	54.00000	73.00000	66.00000	82.00000
	2	54.00000	32.00000	64.00000	45.00000
	3	41.00000	49.00000	24.00000	47.00000

TABLE 81

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 5

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	265.3034	173160.2	1	173160.2	.05
S (SEX)	69.0000	266.0208	1	266.0208	N.S.
Q (I.Q.)	2.5682	652.6875	1	652.6875	N.S.
C (Cont. Status)	.0406	29.62500	2	14.81250	N.S.
SQ	.0001	.2083333E-01	1	.2083333E-01	N.S.
SC	.2606	200.7917	2	100.3958	N.S.
QC	1.4359	729.8750	2	364.9375	N.S.
SQC	1.5159	770.5417	2	385.2708	N.S.
R(SQC)		9149.250	36	254.1458	- -

Proger

TABLE 82

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 5

CELL MEANS

S = 1		1	2		
		57.70833	67.41667		
Q = 1		1	2		
		83.75000	56.75000		
C = 1		1	2	3	
		61.12500	59.31250	59.25000	
Q = 2		1	2		
S = 1		61.41667	54.00000		
		59.08333	58.75190		
C = 1		1	2	3	
S = 1		61.62500	55.62500	59.87500	
	2	60.62500	64.00000	63.62500	
C = 2		1	2	3	
Q = 1		60.37500	62.12500	60.25000	
	2	61.87500	57.50000	59.25000	
S = 2		1			
C = 1		1	2	3	
Q = 1		55.25000	53.00010	65.00000	
	2	57.00000	58.25000	45.75000	
S = 2					
C = 2		1	2	3	
Q = 1		55.50000	71.25000	71.50000	
	2	65.75000	56.75000	57.75000	
S = 1 Q = 1					
R = 1		1	2	3	4
C = 1		79.00000	40.00000	73.00000	65.00000
	2	40.00000	55.00000	55.00000	40.00000
		72.00000	78.00000	57.00000	55.00000
S = 1 Q = 2					
R = 1		1	2	3	4
C = 1		60.00000	37.00000	34.00000	52.00000
	2	54.00000	60.00000	51.00000	66.00000
	3	73.00000	68.00000	23.00000	23.00000
S = 2 Q = 1					
R = 1		1	2	3	4
C = 1		51.00000	40.00000	77.00000	69.00000
	2	63.00000	72.00000	91.00000	82.00000
	3	56.00000	66.00000	82.00000	72.00000
S = 2 Q = 2					
R = 1		1	2	3	4
C = 1		54.00000	72.00000	55.00000	82.00000
	2	59.00000	60.00000	53.00000	50.00000
	3	41.00000	49.00000	50.00000	66.00000

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TABLE 83

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 6

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	56.4628	287061.3	1	287061.3	N.S.
S (SEX)	2.0606	660.0833	1	660.0833	N.S.
Q (I.Q.)	9.5570	5084.083	1	5084.083	.01
C (Cont. Status)	.1127	151.2917	2	75.64583	N.S.
SQ	.6022	320.3333	1	320.3333	N.S.
SC	7.4254	885.7917	2	442.8958	N.S.
QC	1.2621	1342.792	2	671.3958	N.S.
SQC	.1121	119.2917	2	59.64583	N.S.
R(SQC)		19151.00	36	531.9722	--

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Proger

TABLE 84

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMEER: PERIOD 6

CELL MEANS

S =		1	2		
		81.04167	73.83500		
C =		1	2		
		87.62500	87.04167		
C =		1	2	3	
		75.47750	75.75000	79.61250	
Q =		1	2		
S = 1	1	87.91667	88.16667		
	2	81.33333	85.91667		
C =		1	2	3	
S = 1	1	79.62500	75.12500	83.37500	
	2	74.25000	76.37500	79.25000	
C =		1	2	3	
Q = 1	1	79.37500	86.87500	85.12500	
	2	73.00000	84.62500	83.50000	
S = 1					
C =		1	2	3	
Q = 1	1	85.00000	86.75000	110.00000	
	2	72.25000	82.50000	89.75000	
S = 2					
C =		1	2	3	
Q = 1	1	74.75000	87.00000	84.25000	
	2	73.75000	89.75000	89.25000	
S = 1 Q = 1					
C =		1	2	3	4
R = 1	1	85.00000	60.00000	101.00000	83.00000
	2	53.00000	135.00000	97.00000	69.00000
	3	74.00001	96.00000	137.00000	135.00000
S = 1 Q = 2					
C =		1	2	3	4
R = 1	1	53.00000	61.00000	97.00000	90.00000
	2	69.00000	87.00000	85.00000	97.00000
	3	101.00000	92.00000	41.00000	41.00000
S = 2 Q = 1					
C =		1	2	3	4
R = 1	1	45.00000	60.00000	101.00000	92.00000
	2	92.00000	70.00000	90.00000	90.00000
	3	69.00000	89.00000	98.00000	74.00000
S = 2 Q = 2					
C =		1	2	3	4
R = 1	1	92.00000	78.00000	87.00000	90.00000
	2	71.00000	53.00000	129.00000	45.00000
	3	45.00000	47.00000	71.00000	69.00000

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TABLE 85

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 6

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	F LEVEL
MEAN	60.9057	286288.5	1	286288.5	N.S.
S (SEX)	1.2196	336.0208	1	336.0208	N.S.
Q (I.Q.)	7.2102	4700.521	1	4700.521	.05
C (Cont. Status)	.0048	6.166667	2	3.083333	N.S.
SQ	.4226	275.5208	1	275.5208	N.S.
SC	6.2650	1257.167	2	628.5833	N.S.
QC	.9933	1295.167	2	647.5833	N.S.
SQC	.1539	200.6667	2	100.3333	N.S.
R(SQC)		23469.25	36	651.9236	- -

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Proger

TABLE 86

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 6

CELL MEANS

S =	1	2
	73.57500	74.[illegible]

Q =	1	2
	87.12500	67.[illegible]

C =	1	2	3
	77.18750	76.[illegible]	77.03750

S =	Q = 1	Q = 2
1	92.16667	67.[illegible]
2	82.03333	67.03333

S =	C = 1	C = 2	C = 3
1	77.12500	75.00000	87.50000
2	77.25000	78.62500	67.87500

Q =	C = 1	C = 2	C = 3
1	81.75000	65.00000	[illegible].62500
2	72.62500	65.62500	60.75000

S = 1

Q =	C = 1	C = 2	C = 3
1	85.50000	83.00000	107.00000
2	67.75000	67.00000	68.00000

S = 2

Q =	C = 1	C = 2	C = 3
1	77.00000	67.00000	82.25000
2	77.50000	70.25000	53.50000

S = 1 Q = 1

C =	R = 1	R = 2	R = 3	R = 4
1	96.00000	60.00000	109.00000	81.00000
2	43.00000	126.00000	98.00000	60.00000
3	89.00000	96.00000	125.00000	126.00000

S = 1 Q = 2

C =	R = 1	R = 2	R = 3	R = 4
1	49.00000	29.00000	104.00000	90.00000
2	62.00000	57.00000	51.00000	98.00000
3	109.00000	105.00000	29.00000	29.00000

S = 2 Q = 1

C =	R = 1	R = 2	R = 3	R = 4
1	51.00000	60.00000	103.00000	88.00000
2	93.00000	60.00000	97.00000	90.00000
3	69.00000	89.00000	190.00000	80.00000

S = 2 Q = 2

C =	R = 1	R = 2	R = 3	R = 4
1	57.00000	62.00000	74.00000	90.00000
2	67.00000	57.00000	113.00000	52.00000
3	46.00000	41.00000	67.00000	60.00000

TABLE 87

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 6

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	119.1678	240125.5	1	240125.5	N.S.
S (SEX)	.3751	652.6875	1	652.6875	N.S.
Q (I.Q.)	3.8538	2015.021	1	2015.021	N.S.
C (Cont. Status)	.1008	132.0417	2	66.02083	N.S.
SQ	3.3278	1740.021	1	1740.021	N.S.
SC	1.5090	1125.375	2	562.6875	N.S.
QC	1.2520	1309.292	2	654.6458	N.S.
SQC	.7132	745.7917	2	372.8958	N.S.
R(SQC)		18823.25	36	522.8681	- -

Proger

TABLE 88

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 6

CELL MEANS

S =		1	2			
		74.41567	67.04167			
Q =		1	2			
		77.20833	64.25000			
C =		1	2	3		
		72.75000	70.75000	64.68750		
Q =		1	2			
S =	1	85.31667	61.91667			
	2	67.50000	66.58333			
C =		1	2	3		
S =	1	74.62500	69.62500	70.00000		
	2	70.87500	71.87500	58.37500		
C =		1	2	3		
Q =	1	71.87500	81.50000	78.25000		
	2	73.62500	60.00000	59.12500		
S = 1						
C =		1	2	3		
Q =	1	79.00000	82.00000	90.75000		
	2	70.25000	57.25000	58.25000		
S = 2						
C =		1	2	3		
Q =	1	64.75000	61.00000	56.75000		
	2	77.00000	69.75000	60.00000		
S = 1 Q = 1						
R =		1	2	3	4	
C =	1	87.00000	54.00000	91.00000	85.00000	
	2	64.00000	130.00000	80.00000	55.00000	
	3	52.00000	87.00000	130.00000	130.00000	
S = 1 Q = 2						
R =		1	2	3	4	
C =	1	64.00000	30.00000	97.00000	90.00000	
	2	61.00000	39.00000	40.00000	80.00000	
	3	91.00000	78.00000	32.00000	32.00000	
S = 2 Q = 1						
R =		1	2	3	4	
C =	1	43.00000	95.00000	81.00000	65.00000	
	2	65.00000	70.00000	80.00000	80.00000	
	3	55.00000	65.00000	55.00000	55.00000	
S = 2 Q = 2						
R =		1	2	3	4	
C =	1	61.00000	79.00000	78.00000	90.00000	
	2	43.00000	39.00000	58.00000	58.00000	
	3	46.00000	57.00000	82.00000	58.00000	

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Proger

TABLE 89

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 6

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	272.1671	224543.5	1	224543.5	.05
S (SEX)	5.3007	204.1875	1	204.1875	N.S.
Q (I.Q.)	2.5564	825.0208	1	825.0208	N.S.
C (Cont. Status)	.6052	288.1667	2	144.0833	N.S.
SQ	.1194	38.52083	1	38.52083	N.S.
SC	.2228	210.5000	2	105.2500	N.S.
QC	.7377	476.1667	2	238.0833	N.S.
SQC	1.4636	944.6657	2	472.3333	N.S.
R(SQC)		11618.25	36	322.7292	- -

Proger

TABLE 90

DISTAR LONGITUDINAL DATA

DISTAR SOTRY BOOK NUMBER: PERIOD 6

CELL MEANS

S = 1		1	2		
Q = 1		66.33333	70.45833		
C = 1		1	2		
		72.54167	64.25000		
Q = 2		1	2	3	
		71.43750	68.31250	65.43750	
S = 1	C = 1	1	2		
		69.58333	63.08333		
	C = 2	1	2		
		75.50000	65.41667		
S = 2	C = 1	1	2	3	
Q = 1		71.87500	63.62500	63.50000	
Q = 2		71.00000	73.00000	67.37500	
	C = 2	1	2	3	
Q = 1		72.87500	70.75000	74.00000	
Q = 2		70.00000	65.87500	56.87500	
S = 1	C = 1	1	2	3	
Q = 1		78.25000	60.25000	70.25000	
Q = 2		65.50000	67.00000	56.75000	
S = 2	C = 2	1	2	3	
Q = 1		67.50000	81.25000	77.75000	
Q = 2		74.50000	64.75000	57.00000	
S = 1 Q = 1	R = 1	1	2	3	4
C = 1		87.00000	54.00000	91.00000	81.00000
C = 2		48.00000	59.00000	80.00000	54.00000
C = 3		76.00000	87.00000	59.00000	59.00000
S = 1 Q = 2	R = 1	1	2	3	4
C = 1		48.00000	29.00000	95.00000	90.00000
C = 2		61.00000	67.00000	60.00000	80.00000
C = 3		91.00000	78.00000	29.00000	29.00000
S = 2 Q = 1	R = 1	1	2	3	4
C = 1		60.00000	54.00000	91.00000	65.00000
C = 2		95.00000	80.00000	90.00000	90.00000
C = 3		74.00000	74.00000	87.00000	76.00000
S = 2 Q = 2	R = 1	1	2	3	4
C = 1		61.00000	80.00000	67.00000	90.00000
C = 2		67.00000	67.00000	78.00000	47.00000
C = 3		46.00000	41.00000	67.00000	74.00000

TABLE 91

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 7

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	57.1690	358975.0	1	358975.0	N.S.
S (SEX)	1.0278	450.1875	1	450.1875	N.S.
Q (I.Q.)	9.3287	6279.187	1	6279.187	.01
C (Cont. Status)	.0717	95.04167	2	47.52083	N.S.
SQ	.6507	438.0208	1	438.0208	N.S.
SC	3.3848	672.8750	2	336.4375	N.S.
QC	.9851	1326.125	2	663.0625	N.S.
SQC	.1471	198.7917	2	99.39583	N.S.
R(SQC)		24231.75	36	673.1042	- -

TABLE 92

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: PERIOD 7

CELL MEANS

S =		1	2		
		89.54167	83.41667		
Q =		1	2		
		97.91667	75.04167		
C =		1	2	3	
		86.62500	84.68750	88.12500	
Q =		1	2		
S =	1	104.00000	75.08333		
	2	91.83333	75.00000		
C =		1	2	3	
S =	1	88.50000	83.87500	96.25000	
	2	84.75000	85.50000	80.00000	
C =		1	2	3	
Q =	1	91.62500	96.12500	106.00000	
	2	81.62500	73.25000	70.25000	
S =	1				
C =		1	2	3	
Q =	1	97.50000	95.50000	119.00000	
	2	79.50000	72.25000	73.50000	
S =	2				
C =		1	2	3	
Q =	1	85.75000	96.75000	93.00000	
	2	83.75000	74.25000	67.00000	

S = 1 Q = 1

R =	1	2	3	4
C = 1	109.00000	67.00000	116.00000	98.00000
2	67.00000	142.00000	106.00000	67.00000
3	83.00000	109.00000	142.00000	142.00000

S = 1 Q = 2

R =	1	2	3	4
C = 1	67.00000	38.00000	115.00000	98.00000
2	70.00000	60.00000	53.00000	106.00000
3	116.00000	102.00000	38.00000	38.00000

S = 2 Q = 1

R =	1	2	3	4
C = 1	53.00000	67.00000	116.00000	107.00000
2	107.00000	84.00000	98.00000	98.00000
3	78.00000	101.00000	110.00000	83.00000

S = 2 Q = 2

R =	1	2	3	4
C = 1	70.00000	84.00000	83.00000	98.00000
2	81.00000	60.00000	102.00000	54.00000
3	54.00000	55.00000	81.00000	78.00000

TABLE 93

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 7

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	82.0074	371008.3	1	371008.3	N.S.
S (SEX)	5.6756	546.7500	1	546.7500	N.S.
Q (I.Q.)	6.6590	4524.083	1	4524.083	.05
C (Cont. Status)	.1018	94.79167	2	47.39583	N.S.
SQ	.1418	96.33333	1	96.33333	N.S.
SC	6.9030	1560.375	2	780.1875	N.S.
QC	.6854	931.2917	2	465.6458	N.S.
SQC	.1664	226.0417	2	113.0208	N.S.
R(SQC)		24458.00	36	679.3889	- -

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TABLE 94

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: PERIOD 7

CELL MEANS

S =	1	1	2		
		91.29167	84.54167		
Q =	1	1	2		
		97.62500	78.20833		
C =	1	1	2	3	
		89.06250	85.93750	88.75000	
Q =	1	1	2		
S = 1	1	102.41667	80.16667		
	2	92.83333	76.25000		
C =	1	1	2	3	
S = 1	1	90.00000	83.87500	100.00000	
	2	88.12500	88.00000	77.50000	
C =	1	1	2	3	
Q = 1	1	94.12500	94.37500	104.37500	
	2	84.00000	77.50000	73.12500	
S = 1					
C =	1	1	2	3	
Q = 1	1	99.50000	91.75000	116.00000	
	2	80.50000	76.00000	84.00000	
S = 2					
C =	1	1	2	3	
Q = 1	1	88.75000	97.00000	92.75000	
	2	87.50000	79.00000	62.25000	
S = 1	Q = 1				
R =	1	1	2	3	4
C = 1	1	109.00000	67.00000	125.00000	97.00000
	2	56.00000	133.00000	111.00000	67.00000
	3	89.00000	109.00000	133.00000	133.00000
S = 1	Q = 2				
R =	1	1	2	3	4
C = 1	1	56.00000	48.00000	120.00000	98.00000
	2	70.00000	64.00000	59.00000	111.00000
	3	125.00000	115.00000	48.00000	48.00000
S = 2	Q = 1				
R =	1	1	2	3	4
C = 1	1	59.00000	67.00000	125.00000	104.00000
	2	104.00000	88.00000	98.00000	98.00000
	3	69.00000	102.00000	111.00000	89.00000
S = 2	Q = 2				
R =	1	1	2	3	4
C = 1	1	71.00000	88.00000	94.00000	98.00000
	2	77.00000	64.00000	115.00000	60.00000
	3	54.00000	49.00000	77.00000	69.00000

TABLE 95

DISTAR LONGITUDINAL DATA.

DISTAR BOOK C NUMBER: PERIOD 7

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	968.5626	266859.2	1	266859.2	.05
S (SEX)	.7056	9.187500	1	9.187500	N.S.
Q (I.Q.)	.6945	275.5208	1	275.5208	N.S.
C (Cont. Status)	4.1113	2389.875	2	1194.937	N.S.
SQ	.0328	13.02083	1	13.02083	N.S.
SC	.8348	676.6250	2	338.3125	N.S.
QC	.7326	581.2917	2	290.6458	N.S.
SQC	1.0216	810.5417	2	405.2708	N.S.
R(SQC)		14281.75	36	396.7153	- -

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TABLE 96

DISTAR LONGITUDINAL DATA

DISTAR BOOK C NUMBER: PERIOD 7

CELL MEANS

S =		1	2		
Q =	1	73.00000	74.12500		
		1	2		
C =	1	73.95833	72.16667		
		1	2	3	
Q =	1	83.50000	73.93750	66.25000	
		1	2		
S =	1	73.91667	72.08333		
	2	76.00000	72.25000		
C =		1	2	3	
S =	1	85.87500	69.12500	70.00000	
	2	81.12500	78.75000	62.50000	
		1	2	3	
Q =	1	83.25000	81.25000	66.37500	
	2	83.75000	66.62500	66.12500	
S =	1				
C =		1	2	3	
Q =	1	91.25000	72.00000	70.50000	
	2	80.50000	66.25000	69.50000	
S =					
C =		1	2	3	
Q =	1	75.25000	90.50000	62.25000	
	2	87.00000	67.00000	62.75000	
S =	1	Q = 1			
R =		1	2	3	4
C =	1	100.00000	60.00000	106.00000	99.00000
	2	72.00000	63.00000	93.00000	60.00000
	3	56.00000	100.00000	63.00000	63.00000
S =	1	Q = 2			
R =		1	2	3	4
C =	1	72.00000	41.00000	111.00000	99.00000
	2	69.00000	47.00000	56.00000	93.00000
	3	106.00000	90.00000	41.00000	41.00000
S =	2	Q = 1			
R =		1	2	3	4
C =	1	56.00000	60.00000	106.00000	79.00000
	2	79.00000	87.00000	98.00000	98.00000
	3	60.00000	72.00000	61.00000	56.00000
S =	2	Q = 2			
R =		1	2	3	4
C =	1	69.00000	87.00000	94.00000	98.00000
	2	72.00000	47.00000	90.00000	59.00000
	3	54.00000	65.00000	72.00000	60.00000

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 7

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	F LEVEL
MEAN	116.3694	326535.0	1	326535.0	N.S.
S (SEX)	.3575	266.0208	1	266.0208	N.S.
Q (I.Q.)	5.2471	2806.021	1	2806.021	.05
C (Cont. Status)	.0015	2.041667	2	1.020833	N.S.
SQ	1.3916	744.1875	1	744.1875	N.S.
SC	1.1339	683.0417	2	341.5208	N.S.
QC	1.2814	1370.542	2	685.2708	N.S.
SQC	.5632	602.3750	2	301.1875	N.S.
R(SQC)		19251.75	36	534.7708	--

Proger

TABLE 98

DISTAR LONGITUDINAL DATA

DISTAR STORY BOOK NUMBER: PERIOD 7

CELL MEANS

S =		1	2		
		84.83333	80.12500		
Q =		1	2		
		90.12500	74.83333		
C =		1	2	3	
		82.25000	82.43750	82.75000	
Q =	1	96.41667	73.25000		
S =	2	83.83333	76.41667		
C =		1	2	3	
	1	83.25000	81.00000	90.25000	
S =	2	81.25000	83.87500	75.25000	
C =		1	2	3	
	1	84.37500	88.37500	97.62500	
Q =	2	80.12500	76.50000	67.87500	
S = 1	C =	1	2	3	
	1	90.75000	86.00000	112.00000	
Q =	2	75.75000	76.00000	68.00000	
S = 2	C =	1	2	3	
	1	79.00000	90.75000	92.75000	
Q =	2	84.50000	77.00000	67.75000	
S = 1	Q = 1	R =	1	2	3	4
	C =	1	100.00000	60.00000	106.00000	97.00000
		2	56.00000	135.00000	93.00000	60.00000
		3	80.00000	100.00000	135.00000	135.00000
S = 1	Q = 2	R =	1	2	3	4
	C =	1	56.00000	38.00000	111.00000	98.00000
		2	69.00000	75.00000	67.00000	93.00000
		3	106.00000	90.00000	38.00000	38.00000
S = 2	Q = 1	R =	1	2	3	4
	C =	1	67.00000	60.00000	106.00000	79.00000
		2	79.00000	88.00000	98.00000	98.00000
		3	79.00000	80.00000	92.00000	80.00000
S = 2	Q = 2	R =	1	2	3	4
	C =	1	69.00000	80.00000	83.00000	98.00000
		2	89.00000	75.00000	90.00000	54.00000
		3	54.00000	69.00000	89.00000	79.00000

APPENDIX D

TABLES FOR DISTAR INTENSIVE STUDY:

INTRA - YEAR FINDINGS ACROSS ALL 7 PERIODS

TABLE 99

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: ACROSS ALL PERIODS

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	47.5744	1194885.	1	1194885.	N.S.
S (SEX)	.8277	2135.146	1	2135.146	N.S.
Q (I.Q.)	8.1223	25116.15	1	25116.15	.01
C (Cont. Status)	.0957	927.8750	2	463.9375	N.S.
M (Measurement)	65.6701	105400.5	6	17566.74	.01
SQ	.8342	2579.646	1	2579.646	N.S.
SC	3.6043	4947.077	2	2473.539	N.S.
QC	1.5669	9690.792	2	4845.396	N.S.
SM	.8448	273.0833	6	45.51389	N.S.
QM	7.9601	1605.000	6	267.5000	.01
CM	.6737	202.2083	12	16.850.69	N.S.
SQC	.2219	1372.542	2	686.2708	N.S.
SQM	1.6032	328.2500	6	53.87500	N.S.
SCM	.4427	48.75595	12	4.062996	N.S.
QCM	.7442	300.1250	12	25.01042	N.S.
R(SQC)		111321.0	36	3092.251	- -
SQCM	.2731	110.1250	12	9.177083	N.S.
RM(SQC)		7258.714	216	33.61516	- -

Proger

TABLE 100

DISTAR LONGITUDINAL DATA

DISTAR BOOK A NUMBER: ACROSS ALL PERIODS

CELL MEANS

S =		1	2				
Q =	1	62.15476	57.11310				
		1	2				
C =	1	68.27976	50.98810				
		1	2	3			
M =	1	57.99107	59.00900	61.91071			
		1	2	3	4	5	6
Q =	1	33.12500	42.37500	50.20833	59.77083	68.14583	77.3
		1	2				
S = 1	1	73.57143	60.73810				
	2	62.39910	51.23810				
C =		1	2	3			
S = 1	1	59.01786	57.75000	69.69643			
	2	56.96429	60.25000	54.12500			
C =		1	2	3			
Q = 1	1	59.32143	69.53571	75.98214			
	2	56.65071	48.46429	47.83929			
S = 1							
C =		1	2	3			
Q = 1	1	63.00000	68.64286	89.07143			
	2	55.03571	46.85714	50.32143			
S = 2							
C =		1	2	3			
Q = 1	1	55.64286	70.42857	62.85286			
	2	58.28571	50.07143	45.35714			
S = 1 Q = 1							
R =		1	2	3	4		
C = 1	1	74.14286	44.00000	78.42857	55.42857		
	2	47.14286	113.14286	70.28571	44.00000		
	3	55.85714	74.14286	113.14286	113.14286		
S = 1 Q = 2							
R =		1	2	3	4		
C = 1	1	47.14286	22.85714	75.57143	74.57143		
	2	47.00000	37.00000	33.14286	70.28571		
	3	73.42857	77.14286	22.85714	22.85714		
S = 2 Q = 1							
R =		1	2	3	4		
C = 1	1	33.14286	44.00000	74.42857	67.00000		
	2	67.00000	65.57143	74.57143	74.57143		
	3	55.28571	61.14286	78.28571	55.85714		
S = 2 Q = 2							
R =		1	2	3	4		
C = 1	1	47.00000	65.57143	46.00000	74.57143		
	2	52.71429	37.00000	77.14286	33.42857		
	3	33.57143	36.85714	52.71429	56.28571		

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: ACROSS ALL PERIODS

ANALYSIS OF VARIANCE

SOURCE	F	SS	DF	MS	P LEVEL
MEAN	63.6562	1193573.	1	1193573.	N.S.
S (SEX)	.8201	1122.012	1	1122.012	N.S.
Q (I.Q.)	6.2236	18750.30	1	118750.30	.05
C (Cont. Status)	.0397	280.1845	2	140.0923	N.S.
M (Measurement)	62.8211	115061.8	6	19176.96	.01
SQ	.4541	1368.107	1	1368.107	N.S.
SC	6.1255	6534.899	2	3267.449	N.S.
QC	1.1705	7052.577	2	3526.289	N.S.
SM	.7823	369.2798	6	61.54663	N.S.
QM	6.4486	1831.577	6	305.2629	.01
CM	.4338	293.9821	12	24.49851	N.S.
SQC	.1771	1066.839	2	533.4196	N.S.
SQM	1.6619	472.0179	6	78.66964	N.S.
SCM	.9430	314.1845	12	26.18204	N.S.
QCM	1.1930	677.6726	12	56.47272	N.S.
R(SQC)		108459.1	36	3012.752	- -
SQCM	.5865	333.1607	12	27.76339	N.S.
RM(SQC)		10224.93	216	47.33763	- -

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TABLE 102

DISTAR LONGITUDINAL DATA

DISTAR BOOK B NUMBER: ACROSS ALL PERIODS

CELL MEANS

S =	1	2					
	61.42857	57.77381					
Q =	1	2					
	67.07143	52.13095					
C =	1	2	3				
	58.52679	59.51786	60.75893				
M =	1	2	3	4	5	6	
	31.41667	41.70833	50.29167	59.91667	68.72917	77.22917	
Q =	1	2					
S = 1	70.91667	51.94048					
2	63.22619	52.32143					
C =	1	2	3				
S = 1	58.46429	57.14286	66.67857				
2	58.58929	61.89286	52.83929				
C =	1	2	3				
Q = 1	60.26786	67.23214	73.71429				
2	56.78571	51.80357	47.80357				
S = 1							
C =	1	2	3				
Q = 1	63.57143	64.35714	84.82143				
2	53.35714	49.92857	52.53571				
S = 2							
C =	1	2	3				
Q = 1	56.96429	70.10714	62.60714				
2	60.21429	53.67857	43.07143				
S = 1	Q = 1						
R =	1	2	3	4			
C = 1	74.14286	44.00000	81.57143	54.57143			
2	37.28571	102.28571	73.85714	44.00000			
3	60.57143	74.14286	102.28571	102.28571			
S = 1	Q = 2						
R =	1	2	3	4			
C = 1	37.28571	22.42857	79.14286	74.57143			
2	47.00000	40.85714	38.00000	73.85714			
3	81.57143	83.71429	22.42857	22.42857			
S = 2	Q = 1						
R =	1	2	3	4			
C = 1	38.00000	44.00000	81.57143	64.28571			
2	64.28571	67.00000	74.57143	74.57143			
3	43.14286	61.42857	79.28571	60.57143			
S = 2	Q = 2						
R =	1	2	3	4			
C = 1	47.00000	67.00000	52.28571	74.57143			
2	51.14286	40.85714	83.71429	37.00000			
3	33.57143	36.42857	53.14286	49.14286			

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