Spelling Progress Bulletin Winter 1967

Dedicated to finding the causes of difficulties in learning reading and spelling.

"A closed mind gathers no knowledge*, an open mind is the key to wisdom."

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1. Progress on the Spelling Reform Front, by Abraham Tauber, Ph.D.

London, Eng. was the scene in Oct. 1967 of activity that proved that there's much life in the spelling reform movement yet.

Delegates of the (U.S.) Simpler Spelling Assoc. – S.S.A. (organized in 1946 from an amalgamation of the (American) Spelling Reform Assoc, founded in 1876, and the Simplified Spelling Board, founded in 1906) met with a committee of the (British) Spelling Reform Assoc, founded in 1879) to discuss common problems and projects.

The delegations discussed proposals of the S.S.A. to modify and up-date the spelling reform notation of New Spelling-World English Spelling, for possible use as an initial teaching medium, and for research proposals. These proposals took as their starting point the agreements reached by the S.S.S. and the S.S.A. in 1955–56 on a spelling reform notation which uses the present characters

of the Roman alphabet, and no new characters or diacritics, but includes digraphs as in N(ew) S(pelling) – the British code, and W(orld) E(nglish) S(pelling), as it is called in U.S.A.

The (American) S.S.A. plans to launch experiments in initial reading and teaching English as a second language, using a modified W(orld) E(nglish) S(pelling) as an initial teaching medium for that purpose, and utilizing the successful experience of i.t.a., the Initial Teaching Alphabet of Sir James Pitman.

The American delegation to the meetings was led by Dr. Godfrey Dewey, Secretary of the S.S.A. since its founding, author of Relativ Frequency of English Speech Sounds (Harvard Univ. Press, 1923, 1950) English Heterography (Lake Placid Club Foundation, 1963), and among many other papers, one delivered at the Fourth International Teaching Alphabet Conference at McGill Univ. in Montreal, Canada, on "i.t.a. – not spelling reform, but child and parent of spelling reform."

The second member of the American delegation was Dr. Emmett A. Betts, Research Professor at Miami Univ, well-known reading expert, author of numerous books and research studies, and Executive Board Member of the S.S.A.

The third member of the delegation was Dr. Abraham Tauber, Univ. Professor of Speech at Yeshiva Univ. in New York, author of George B. Shaw. On Language (Philosophical Library, 1963) and a forthcoming history of spelling reform, and a member of the Executive Board of the S.S.A.

Dr. Ben D. Wood, Emeritus Professor of Educational Research at Columbia Univ. and founder of the Educational Records Bureau, a member of the Executive Board of the S.S.A., was unable to attend as a delegate because of illness.

The British delegation consisted of the following members of the Executive Committee of the S.S.S.:

- 1. Sir Graham Savage, formerly Chief Education Officer of the City of London, Chairman of the S.S.S.
- 2. Sir James Pitman, host and Treasurer of the S.S.S.
- 3. Prof. Peter MacCarthy of Leeds Univ., phonetician, selected to translate Androcles and the Lion into the Shaw Alphabet, in accordance with G.B.S.'s will, and
- 4. Mr. William Reed, educator and Head Master of a Public School, Hon. Secretary of the S.S.S.

For information or membership in S.S.A., write Dr. Dewey, Lake Placid Club, N.Y.

2. Fourth Year Results of Study with i.t.a. in Bethlehem Area Schools, by Albert J. Mazurkiewicz, Ed.D.

The i.t.a. Language Arts Project under Title III of ESEA was funded starting June 1, 1966 through August 31, 1967. This grant was established to supplement and extend services of the Bethlehem Area School District to cooperating school districts (East Penn School District, Northampton Area School District, St. Isidore's of Quakertown) and to districts in Region N and throughout the commonwealth by:

- 1. providing a center for observation of i.t.a. as the medium for initiating reading instruction and for the preparation of teachers,
- 2. developing, testing and designing a language arts curriculum, grades 2 through 6, tailored to the skills and knowledge of students who learned to read with i.t.a.,
- 3. providing in-service opportunities which would update teachers' knowledge about language and increase their skill in teaching oral and written communication.

The cooperation of the East Penn School District, the Northampton Area School District, St. Isidore's Catholic School of the Philadelphia Diocese, Quakertown, St. Catharine's and Sacred Heart Schools of the Allentown Diocese has been of inestimable value in meeting the purposes of the project. This population of 835 third grade children, 935 second grade children, and 1043 first grade children, produce data by which i.t.a. and t.o. differences in the population could be studied in the respective districts. While the populations, with attendant differences in socio-economic and intellectual status as well as teacher and supervisory controls, cannot be compared with each other or with Bethlehem, the effect of the changes in the language arts curriculum in the districts can be noted.

This report presents the data on the progress of the 1963-64 Bethlehem population, the original i.t.a. population, in fourth grade, and the 1964-65 replication population in third grade. Then the effect of the changes in the language arts curriculum on the 1965-66 population in second grade and data from the cooperating districts are discussed.

General Conclusions: Fourth Year i.t.a. Study

The fourth year study supported some of the conclusions and results of the third year study noted in the final comprehensive report, *The Initial Teaching Alphabet in Reading Instruction*, (Mazurkiewicz, A.J., Lehigh Univ. Bethlehem, Pa.), sponsored by the Fund for the Advancement of Education and published in 1967. Both Studies provided evidence that children who learn to read with the initial teaching alphabet.

- 1. Advance more rapidly in reading and writing experiences; achieve superior reading skill at an earlier time; read more widely; and have no difficulty in making transition to reading material printed in the traditional alphabet when they are allowed to develop sufficient confidence and efficiency.
- 2. Develop proficiency in encoding in i.t.a. fairly early. The transition to spelling in t.o. occurs with little evidence of confusion in the two years subsequent to initial reading transition *when directed instruction and guidance in spelling are given*. Achievement in spelling on standardized tests and in creative writing is significantly better than the achievement of t.o.-taught children at the end of the second and third years under such an instructional program.

- 3. Are not inhibited in writing as first grade children usually are and this expressiveness continues into the second and third years. Significant accomplishments in the number of running words and the number of polysyllabic words are found in these children's creative writing. No differences in the use of the mechanics of writing, punctuation and capitalization were found between the i.t.a. and t.o.-taught populations.
- 4. Have experienced no deleterious effects on such measures as rate of reading or accuracy of reading, suggesting that the i.t.a.-to-t.o. procedure establishes no negative characteristics, and is no hindrance to later achievement.

Evidence in the fourth year study contradicted the finding of the third year study that the superiority in word-recognition tests in t.o., observable at the end of the first and second years, was not retained at the end of the third year. Positive and statistically significant findings in the area of word recognition for the original population in fourth grade and the replication population refuted the third year's finding of no difference in word recognition.

The third year report indicated that standardized test data of comprehension did not support the teachers' report of higher comprehension as measured by instructional levels and reader-level achievement. Data obtained in the fourth year study provided evidence of *significant differences in comprehension in favor of the i.t.a.-taught replication population in third grade.* The conclusion that the longitudinal effect of i.t.a. appears to diminish by the third year when no unique post-i.t.a. procedures are used is refuted and the longevity of effects of a beginning program of reading and writing in i.t.a. is as yet undetermined.

General Procedures and Information

A two-week workshop on linguistics in the summer of 1966 provided opportunities for teachers to explore their own language patterns using tapes; to acquire knowledge about dialects and intonation patterns and the science of linguistics; and to develop a better understanding of children's language patterns and the techniques for improving them. Workshop leaders were Dr. Carl Lefevre and Dr. Helen Lefevre.

Six Saturday workshops during the school year were structured for teachers in the project area to improve understanding in the areas of intonation and stress, transformational grammar, motivation, writing skill, and poetry.

The 1963-64 Population in its Fourth Year

- 1. The continuation of a functional approach to teaching spelling in which spelling errors in compositions and various writing activities and words selected from curriculum areas would serve as the focus-for the spelling program.
- 2. The continuation of teaching the use of the dictionary with emphasis on a study of prefixes, suffixes, and roots in word study, and a program of word analysis skills emphasizing spelling patterns rather than phonic rules.
- 3. A modification in the use of basal readers emphasizing reading, thinking and study skills.
- 4. A continuation of the emphasis on expanding the child's experiential horizon by the wide use of literature materials to supplement the basal program and reference materials in all curriculum areas.
- 5. Continued experimentation with ideas garnered from the two-week summer and six Saturday workshops during the year-intonation and stress, transformational grammar, motivation, writing skill, and poetry -to support and expand the language-arts curriculum.

Program of Instruction

The reading program was paced to individual rates of learning; and generally resumed at the point where the children had ended the school year. Altho 4¹, 4², and 5¹ materials were being used extensively in the earliest period of the fourth grade, the reader a child completed was not considered to be of specific concern. The teacher was encouraged to move children as naturally as possible through sequential activities while expanding his experience through the study of literary forms, wide use of library, and reference and research in the areas of social studies and science.

Evaluation

The survey of instructional levels as reported in Table 1, obtained at the end of May, 1967, suggest that the plateauing effect noted in prior years(so far as instructional level of readers is concerned) was continuing. Since 94 children in the t.o. population had received remedial instruction in i.t.a. materials during the course of the year, a meaningful comparison was impossible if this portion of the population were included in the total number. The elimination of this portion of the Subtests population changes the original population makeup in Vocabulary relation to the bottom range of achievement considerably Comprehension and comparative results are difficult to interpret.

It must be remembered also that teachers were encouraged to move into literary readers upon the completion of a basal reader and to emphasize wide supplementary reading in an individualized reading approach rather than selecting the next level of basal reader. The results of the instructional level survey on the unequivalent population (not matched for differences in socio-economic status, and the number of repeaters and bilingual students) could be erroneously interpreted to suggest a slight advantage for a t.o. beginning, when the small difference in the percentage of those who had achieved sixth reader status is noted and the lack of equality between the populations is not known. Despite this lack of equivalence in the populations, it is interesting to note the marked difference in instructional level achievement of the bottom portions of these populations when it is remembered that all "remedial readers" were excluded.

Table IInstructional Levels of the i.t.a. and t.o. Fourth Grade, Unequivalent Populations, May 25, 1967, (remedial readers removed)

t.o. reader level	i.t.a. N=273 percentage		t.o. N=80	5 percentage
6^1	1.5	\	1.9	\
5^2	8.4	38.8	8.4	32.6
5 ¹	28.9	/	22.3	/
4^2	13.2	\49.0	11.1	\49.9
4 ¹	35.8	/	38.8	/
3^2	10.0	\12.1	11. 8	\17.4
3^1	2.1	/	5.6	/

Table II, representing instructional level data from pairs within one point on intelligence, on socio-economic status and sex, shows dramatic achievement difference in the population.

The marked differences at the upper and lower points in favor of the i.t.a. population suggest that a beginning program in i.t.a. has longitudinal effects of major proportions through the fourth year of instruction.

Table II

Instructional Levels of Matched Pairs, 1963-64 Population, May, 1967.

t.o. reader level	i.t.a. N=50 percentage	t.o. N=50 percentage
5^2	2	-
5^1	46	24
4^2	6	-
4^1	36	54
3^2	10	22

Scores from a standardized test, the Iowa Test of Basic Skills, and a dictated spelling test, plus samples of written work, were obtained during the last weeks of May to evaluate achievement of the pupils and to determine whether observations of improved spelling and writing behavior were correct.

Table III

Means and Standard Deviation, Subtests of Iowa Test of Basic Skills, i.t.a. and t.o. 1963-64 Populations (children who received remedial instruction removed)

Subtests	i.t.a. N=2	51	t.o. N=82	3	
	I.Q.=104.	73	I.Q.=105.	18	
Subtests	M.	S.D.	M.	S.D.	t
Vocabulary	29.33	6.95	27.55	7.29	3.49*
Comprehension	43.43	13.31	43.89	13.32	48
Spelling	27.94	7.16	28.61	7.02	-1.34
Capitalization	27.83	6.82	27.89	7.03	02
Punctuation	23.92	7.71	24.16	7.23	46
Language usage	20.51	6.44	20.55	6.36	08
Map reading	17.55	5.29	17.36	5.25	.51
Reading graphs	14.78	4.88	15.07	4.62	93
Reference materials	31.54	8.29	31.89	8.34	60

^{*}significant at the 1% level

Though the populations are not equivalent (in that a greater percentage of the i.t.a. populations were repeaters of first grade, having previously failed in t.o., had bilingual difficulties, and/or were from low socio-economic circumstances) Table III shows a statistically significant difference in favor of the i.t.a.-taught population on the measure of vocabulary, with no significant difference on any measure in favor of the t.o. population. This is in contrast to the instructional level data on the populations (Table 1), but tends to confirm the data of Table II. The superiority exhibited by the i.t.a. population at this point in this indicates a persistence of achievement which is unexpected.

Table IV reports data on a dictated spelling test for the unequivalent population.

Table IV

Achievement on a Dictated Spelling Test, 1963-64 i.t.a. and t.o. Populations, May, 1967 (children who received remedial instruction removed)

		i.t.a. N=286		t.o. N=836		
	M	S.D.	M	S.D.	t	
Dictated Spelling Test	-26.99	6.80	25.29.	9.42	3.08*	

^{*}Significant at the 1% level

The procedure used was to dictate the words from the Iowa Test of Basic Skills, Form II, and ask children to write their responses rather than use the test in its proofreading-recognition form. The results of this test indicates that, tho the populations are not equivalent, a clear-cut superiority of the i.t.a. population in spelling exists when words are spelled in isolation.

Table V, showing the results of a study of writing characteristics of the i.t.a. population at the end of the fourth year of school, indicates the degree of spelling accuracy in children's writing. In this case, spelling is examined in the composition of children in response to a picture-stimulus. It would appear that 96.9% accuracy in spelling when the focus of children's efforts are on encoding ideas or thought is an excellent behavior pattern. The study was done to provide a benchmark of achievement in the development of language maturity as defined by the length of the T-unit against which the achievement of second and third grade i.t.a. replication populations could be compared.

Tho the T-unit length of 6.8 obtained on this sample of fourth grade children is lower than Hunt's finding of 8.6 as an index of maturity at the fourth grade, a major difference in the size of word samples used for each population precludes a comparison between the two groups. However, establishment of this measure on the same basis for all second, third and fourth graders of this study allows for a comparison among the classes to determine differences in maturity or the development of maturity when the fourth grade findings are used as a benchmark.

Conclusions: 1963-1964 Population Results

- 1. Persistence of achievement effects into the fourth year are observable between i.t.a. and t.o. populations who were instructed similarly during their four years of schooling but differed in the medium (i.t.a. or t.o.) used in beginning instruction.
- 2. Differences in language development, spelling, vocabulary, and instructional level status are significant while other positive characteristics are noted.

The 1964-1965 Population

As noted in the Comprehensive Report, constraints on the first year's i.t.a. population were pronounced. The elimination of these constraints, the addition of more effective supervision provided by increased funds from an Office of Education research grant, and increased familiarity with the i.t.a. program are characteristics which make the results of the replication population more reliable than those of the 1963-64 population. Pages 33-56 of the Comprehensive Report detail the procedures used and demonstrated the lack of equality of the i.t.a. and t.o. populations. Measures, noted below, were taken to eliminate these characteristics and to provide meaningful comparisons of the populations now in their third year of school.

Preparation of the Third Grade Teachers

Procedures established in the previous year to orient teachers were again followed for this population and are similar to those discussed earlier for the orientation of fourth grade teachers. An emphasis on relating spelling errors and the spelling program to the child's phonetic encodings and to i.t.a. forms was made as in the prior year.

General Observations

A continuation of procedures used "to carry the child as far forward as he could go" was observed. Greater teacher flexibility and freedom to try ideas demonstrated in workshops was noted. Teacher ideas were shared in monthly grade-level meetings.

Evaluation

The survey of instructional levels of the i.t.a. and t.o. populations made in May, 1967, as noted in Table VI, indicate 44.7% of the i.t.a. population and 34.2% of the t.o. population are achieving above the expected 3² instructional level. It appears that more i.t.a.-taught children are able to achieve higher reader level status than t.o.-taught children even tho the i.t.a. population contains a disproportionate number of first grade repeaters and children from bilingual and/or low socioeconomic homes. That a smaller percentage of i.t.a. children read below the expected 3² level can also be seen.

Table VI

Instructional Levels of the i.t.a. and t.o. 1964-65 Populations in the Third Year of Instruction, May, 1966.

	i.t.a. N=735		t.o. $N=508$	
t.o. reader level	percentage		percentage	
5 ¹	1.6		2.6	
4^2	18.2	44.7	15.5	34.2
4 ¹	24.9		16.1	
3^2	24.1	49.6	26.6	60.3
3 ¹	25.5		33.7	
2^2	4.8	5.4	4.7	5.5
2 ¹ or i.t.a. bk 2	.6		.8	

Table VII reports data on matched pairs from each population. These data confirm the findings, as noted above, and more clearly demonstrate the persistence of the effects of i.t.a. on later achievement over a large segment of the population.

Table VII

Instructional Levels of the Matched Pairs from the i.t.a. and t.o. 1964-65 Populations.

	i.t.a. N=50	t.o. $N=50$
t.o . reader level	percentage	percentage
4^2	4	4
	28	10
4 ¹	36	26
	24	40
3^2	6	14
	2	4
3 ¹		
2^2		
2^1		

32% of the i.t.a. population contrasts markedly with the 16% of the t.o. population achieving above the expected 32 reader level. At the bottom of the distribution, it is noted that 18% of the t.o. population are achieving below the minimal expectancy of 31 as compared to 8% of the i.t.a. population. Thus at both extremes, achievement levels of the i.t.a.-taught populations are better than those of t.o.-taught populations.

Standardized test data on the unequivalent population reported in Table VIII, confirm the findings of instructional level achievment and point up other strengths. The significant differences in vocabulary and comprehension suggest that i.t.a. instruction in first grade is of such potency as to have a lasting effect at least to the end of the third year. This finding, not found previously, might be a reflection of the differences between standardized tests, that the Iowa Test of Basic Skills, less restricted in its construction to the curriculum of one or two basal programs (as in the California, Stanford, and Metropolitan tests), is a more reliable test of achievment. In any case, had no testing been done until the third year (disregarding lack of equivalency of the populations) and the results then examined, the clear cut superiority of the i.t.a. beginning over the t.o. beginning would have been observed.

When it is further noted that the populations are not equivalent and that the mean I.Q. scores differ to some extent, the positive differences in favor of the i.t.a. population reinforces the conclusion that learning is enhanced by the i.t.a.-to-t.o. procedure, that initial success in learning to read is a potent factor in later achievment.

The maintenance of superiority in vocabulary development by the i.t.a. population when the populations are matched as noted in Table IX indicates the strength of the i.t.a.-to-t.o. procedure on the factor it was designed to affect. The lack of significant difference in comprehension (and on the other skill areas not reported here) is not unexpected since both populations have been instructed similarly.

Table VIIIIowa Test of Basic Skills Results of the i.t.a. and t.o. 1964-65 Populations, May, 1967, (third year of schooling)

Subtests	i.t.a. N=6	58	t.o. N=56	2	
	I.Q.=110	.15	I.Q.=112	.04	
Subtests	M.	S.D.	M.	S.D.	t
Vocabulary	24.02	5.56	22.14	6.51	5.35**
Comprehension	35.75	11.94	33.53	12.94	3.05**
Spelling	23.05	6.41	22.95	6.38	.27
Capitalization	24.14	7.82	23.49	7.54	1.41
Punctuation	21.92	7.72	21.91	8.08	.02
Language usage	19.05	2.17	18.58	7.55	1.14
Map reading	15.39	4.41	14.95	4.69	1.69
Reading graphs	13.31	4.21	12.94	4.27	1.54
Reference materials	25.84	7.39	24.89	8.68	2.06*

^{*}Significant at 5% level **Significant below 1% level

Table IX

Results of Matched Pairs, i.t.a. and t.o. 1964-65 Populations, Iowa rest of Basic Skills, May, 1967.

		i.t.a. N=50		t.o. $N=50$	
	M	S.D.	M.	S.D.	t
Vocabulary	23.12	19.94	4.84	7.19	2.59*
Comprehension	32.78	11.16	31.40	13.14	.56

^{*}Significant at the 1% level

While no differences between the populations in spelling, measured as a proofreading skill, were noted on the Iowa Test, Table X reports data on a dictated version of the words in Form II of this test. It is noted that the i.t.a. population, though less able than the t.o. population in terms of intelligence and negatively skewed on other factors, achieves significantly better on the dictated spelling list than the t.o. population, confirming the previous year's findings. It should be noted that perceptual recognition has been positively affected by the i.t.a.-t.o. procedure altho the difference in recognition of spelling errors is not significantly different from the t.o. population (i.t.a. mean, 23.05; t.o. mean 22-95), and that spelling in isolation is enhanced at this point in time.

Table XAchievement on a Dictated Spelling Test, i.t.a. and t.o. 1964-65 Populations, May, 1967.

		i.t.a.		t.o.	
	M	N=709	M.	N=541	t
Dictated	24.28	S.D.	22.78	S.D.	3.19*
Spelling Test		8.14		9.31	

^{*}Significant beyond the 1% level

Writing samples obtained during this same time, reported in Table XI confirm the previous year's findings that the children spell with a high degree of accuracy when writing creatively and when their focus is on expressing thought, not spelling. Spelling has been positively affected rather than negatively as has been presumed by poorly informed critics.

Table XIWriting Characteristics of Random Sample, 1964-65 Unequivalent Populations, May, 1967, (third year of schooling)

	i.t.a. N=70	t.o. N=70
Number of running words	8082.00	4085.00
Mean number running words	108.30	58.40
Words spelled correctly	7756.30	3872.60
Percentage correct spelling	95.97	94.80
T-unit length	6.20	6.00
T-units per sentence	1.96	1.68
Mean sentence length	9.50	10.14
Mean clause length	5.74	5.95

Conclusions: 1964-65 Populations

- 1. Replication studies indicate that reading skill, as measured by vocabulary and reading comprehension, is enhanced by the i.t.a.-to-t.o. procedure and that this effect persists in instructional levels to at least the end of the Third year of school.
- 2. Spelling, as measured by a dictated spelling test, is enhanced for the i.t.a.-taught population but appears to be no better than a t.o. child's in free writing at the end of the third year. Since word choice differs in creative writing, the acceptable definition of spelling skill for research purposes is response to a common list of isolated words. In this respect, the i.t.a.-taught child is the superior speller.
- 3. Matched pair data support the major hypothesis that vocabulary-word recognition is enhanced by the i.t.a.-t.o. procedure.

The 1965-66 Population

Since all of the first grade, 1965-66 population, received i.t.a. instruction, no meaningful comparisons could be made except where experimental treatments between two portions of i.t.a. population could be established. Data gathered on a study of mathemagenic* behaviors on later testing indicated that standardized tests of comprehension were measures of those elements found in basal reader workbooks and that significant gains in comprehension as measured by standardized tests could be effected by specific practice.

The 1965-66 population in its second year of school, however, was subject to a study of the effects of curriculum change on writing characteristics. A linguistics workshop proceeded the writing of a curriculum for the second grade which in turn reflected many of the ideas embodied in the workshop and culled from teacher reports, ideas and experiences. Table XII reports achievement of the second grade population in reading, at the end of the year as measured by the Metropolitan Reading Test.

Table XII

Means and Standard Deviation, Metropolitan heading Test, Primary II, 1965-66 i.t.a. Population, May, 1967.

	M.	S.D.	Grade Equivalent
Word knowledge	25	9.57	3.6
Paragraph meaning	21	7.71	3.4
N=1140			

Writing samples obtained in December and May measured the effect of the revised curriculum on characteristics of children's writing, reported in Table XIII.

Table XIII

Means of Writing Characteristics of Random Samples of i.t.a. 1965-66 Population, Dec. 1966, and May, 1967.

	Dec. M.	May M.
Number of running words	78.79	84.10
T-unit length	5.70	6.20
T-units per sentence	1.78	1.92
Sentence length	11.10	11.40
Clause length	6.08	5.97
N=49		

The data suggest that a degree of improvement in language maturity as measured by the T-unit has been effected through teacher's use of the elements of the changed curriculum. These changes in instructional practices produced a maturity level which is identical to that found for third grade i.t.a.-taught children not subject to the new curriculum. (6.2, Table XI) It is noted, also that the second grade May result is not significantly dissimilar from the result found for fourth grade children. (6.85, Table V) Thus it can be assumed that this second grade population is as mature in their use of written language as measured by the T-unit, as third and fourth graders. This maturity appears to be reflected in the population's ability to write clauses which are similar in length to those of third and fourth grade children. Expansion of the main clause using transformational and generative grammar approaches appears to have had a significant effect.

^{*}Pre-teaching test-like behavior, attitudes and skills.

It should also be noted that the length of sentences written by the second grade i.t.a. population is quite similar to that of the fourth grade population.

Conclusions: 1965-66 Population

- 1. The following major findings are confirmed: the use of i.t.a. in a beginning reading program produces early and effective reading and writing ability; this effect persists at least into the second year; and spelling ability post-i.t.a. is positively affected.
- 2. The development of a curriculum to meet the needs of post-i.t.a. population, in terms of enhancing growth through challenge and the accretion of new curricular skills, has a positive effect in developing language maturity and that is similar to that achieved by third and fourth grade populations without a changed curriculum.

The Cooperating Districts

Therefore, while the population of the cooperating districts, geographically within a fifteen mile radius, experienced variant programs and materials, no great significance is attached to the data. The comparison of the third grade i.t.a. and t.o. populations when all districts including Bethlehem are examined, shown in Table XIV, suggest that the i.t.a.-to-t.o. procedure has a positive effect which approaches significance at the five percent level.

Table XIV

Means obtained on Reading Subtests, Iowa Test of Basic Skills, Comprehensive Third Grade Population (Bethlehem, Northampton, East Penn), May, 1967.

	i.t.a. N=753	t.o. N=1252	
	Mean	Mean	t
Vocabulary	23.96	21.96	1.94*
Comprehension	34.71	33.28	0.83

^{*}Approaching significance at the 5% level.

The combined second grade population, with whom the experimental curriculum post-i.t.a. was used, produced the results given in Table XV. It is observed that word knowledge achievement is higher, corresponding to the results reported on earlier populations.

Table XV

Results of Metropolitan Reading Test, Comprehensive Second Grade Population (includes parochial school), May, 1967.

	i.t.a. N=1430	t.o. N=577
	Mean	Mean
Word knowledge	24.60	19.44
Reading	20.73 Significant	20.18 Not significant

The conclusion positive effect on that the i.t.a-to-t.o. procedure has a word recognition and that this effect lasts into the end of the second and third grade years seems to be supported by the above findings even tho caution in accepting the results noted in Table XIV and XV is warranted.

Results at the second grade level on a dictated spelling test as reported in Table XVI provide for a similar comparison and tend to support earlier conclusions that spelling on a t.o. standard is enhanced by the i.t.a.-to-t.o. procedure.

Table XVI

Results of Dictated Spelling Test, Comprehensive Second Grade Population, May, 1967.

i.t.a. N=1430 t.o. N=577 Mean Mean

Dictated spelling test 16.16 12.56 Significant

The effects of the language arts curriculum on the T-unit as noted in Table XVII indicate a positive growth in number of running words as well as in T-unit length. While the first might reasonably be expected, T-unit length, as an index of writing maturity, does not appear to be subject to such marked growth in normal populations under normal curriculum conditions.

Table XVII

Writing Characteristics of Random Samples, Comprehensive Second Grade i.t.a. Population, Dec. 1966 and May, 1967.

	December	May
Mean number of running words Mean T-unit length	68.61	73.09
N=105	5.83	6.40

A comparison of this second grade result, T-unit length, 6.5, with that of the fourth grade Bethlehem i.t.a. population, T-unit length, 6.85, indicates that the two populations are not significantly different in this factor of language maturity. It can reasonably be concluded that the new curriculum produces an effect on language maturity and that this achievement is not different from that achieved by fourth graders, post-i.t.a., not subject to the new curriculum.

-o0o-

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3. Soviet Education These Last Fifty Years, by E. E. Arctier

The account which follows is taken verbatim from *Soviet Life*, Oct. 1967, the beautifully printed and illustrated monthly published in Washington, D.C. by the Soviet Embassy to the U.S.A. and sold by subscription and in bookstores thruout our land. This is done by mutual agreement between our government and that of the U.S.S.R. which permits our American Embassy in Moscow to publish and sell *Amerika* thruout the Soviet domain. While undoubtedly, each publication puts its best foot forward in behalf of its homeland, we may be reasonably sure that under the watchful eye of the other government, each keeps reasonably close to the truth.

Fifty Years of Soviet Education

ALMOST IMMEDIATELY after the Soviets took power, Lenin signed a decree on the elimination of Russia's mass illiteracy. In prerevolutionary Russia 76 per cent of the population (aged nine and more) was illiterate; the corresponding figure for women was 88 per cent. The rate of illiteracy now is less than one per cent.

The education of a child begins when he is 12 months old and his parents can place him in a nursery. The greater part of the expense of keeping 8.5 million children in nurseries and kindergartens, so that mothers can work and study, is covered by the state. Before the Revolution the country had proctically no preschool facilities.

In old Russia four-fifths of the children of school age received no education. Now eight years of schooling is compulsory. The Soviet Union's 214,000 schools are attended by 48 million boys and girls. Tuition in grade and secondary schools, vocational and professional schools, institutes and universities is free.

Boys and girls can enter a trade or professional school after graduating from the eighth or the tenth grade of secondary school. A two-year or four-year course of study prepares them for a trade or a profession. Four million students are enrolled in the country's 4,000 vocational schools, from which 684,000 were graduated last year, as aganst 7,400 in 1914.

Some 14.3 million people are learning trades and professions and taking refresher courses, also free, right at industrial plants. As many as two million secondary school graduates attend the one-year and two-year vocational schools attached to industrial plants. All told, 72.6 million Soviet people are enrolled in some type of school.

In the 50 years of Soviet power the number of students in schools of higher education has multiplied by 32 times, this year reaching a total of 4,123,000 at 767 institutes and universities. In the past decade the number of students in the country has doubled. Last year college diplomas were awarded to 432,000 graduates, as against 12,200 in 1914.

The growth in the number of schools and students has had a salutary effect on the general level of education. At present in the national economy there are employed 5.2 million people with a college education (50 years ago the figure was 200,000) and 7.6 million people with secondary education (as against 50,000 people half a century ago). All in all 18.3 million Soviet citizens (including people who do not work, pensioners and servicemen) have a college or secondary school education.

Managing the country's industry are 1,770,000 engineers, all with a college education. Last year there were 179,000 in the country's engineering graduating class. There is a substantial growth in the number of science researchers: 711,600 at the beginning of 1967, as against 11,600 in 1914. THUS: As important as its economic growth and its rising living standards are the higher cultural and educational standards in a country of which Lenin wrote in 1913: "Russia is Europe's only country which is so wild and in which the masses of people are so terribly deprived of education, enlightenment and knowledge." Soviet power gave every citizen the equal right (regardless of nationality, sex and social status) to free education. Most tangibly affected were the 40 nationalities of the former Russian Empire, nationalities which had no alphabets of their own. Written languages were created for them after the establishment of Soviet power.

This commentator is especially interested in the 48,000,000 pupils enrolled in those 214,000 elementary and secondary schools. Allowing for the larger population of the U.S.S.R., that enrollment is roughly proportionate to our 43-44 million. Otherwise the two school systems present many differences. In the first place, the Soviet child enters elementary school a year later than does his American agemate and graduates from secondary school a year earlier. That is to say, he puts in ten years to earn the "high school" diploma for which his American counterpart puts in twelve years. And comes out of that decade with a far better education than our lad gets in his dozen years.

As far back as 1961, Arther S. Trace brought out this disturbing situation in his book *What Ivan Knows That Johnny Doesn't*. Already, he wrote, our educators were aware of the vast disparity between Soviet and American schools in the teaching of mathematics and the basic sciences, but both educators and laymen alike tended to take comfort in the belief that in American schools the other basic studies-chiefly literature, history, geography, and such humanist subjects-were in a thriving condition, whereas in the Soviet Union the humanities ran counter to Communist interests and were therefore suppressed in the Soviet schools. "This book," he said, "proposes to present some evidence which, it is hoped, will pretty well shatter that illusion."

And shatter it, it does – and more than pretty well. To begin with, the study of the humanities calls for a big vocabulary. And there the Soviet textbooks leave ours simply nowhere. Their first grade reader runs to 2000 different words five times the number tackled here in the first grade. Furthermore, these 2000 don't expend themselves in the banalities of our *Dick and Jane* or our *Alice and Jerry* but in bits of real and helpful information, in myth and fairy tale and verse from the pens of eminent writers, including some of the pre-Soviet great-Tolstoy, Pushkin, Lermontov, Nekrasov. The second, third and fourth grade readers expand this beginning vocabulary to 4000, 8000, 10,000 words respectively, and their content to ever higher levels of information, of power and beauty, gaiety and wonder, with more and more selections from more and more of Russia's great, both preRevolution and later. At the end of the fourth grade "reading" as such drops out of the curriculum, from thereon, the language hour can devote itself to literature per se.

Just as far above our American level is the study of history in the Soviet class. Here, for example, are a few questions from the 150 on Roman history which all sixth graders are expected to be able to answer by the end of that year.

What events in Greece were taking place during the time the Roman Republic was being established?

What changes occurred in the government of Rome in the fifth to the third century of our era? How did the Third Punic War differ basically from the first two?

What changes took place in the condition of the slaves from the sixth to the second century before our era?

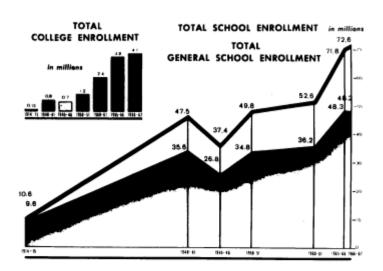
What innovations occurred in Roamn architecture and sculpture?

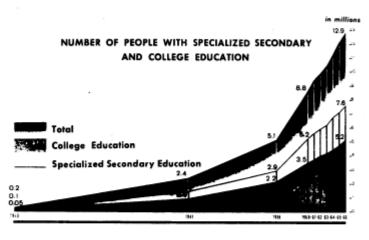
When and why did Roman oratory begin to decline?

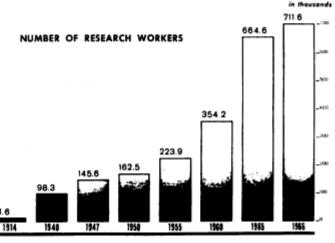
What proportions of our 12 and 13 year olds could give intelligent answers to these questions, even tho they are now in Grade Seven?

Much the same disparity exists in geography which begins as a separate study in grade four and continues as such thru Grade Nine. A distinctive feature of its teaching in the USS t is the emphasis on map study. Without constant reference to maps very little geography can be really absorbed. So besides the wall maps in his classroom and those in his geography text, each pupil has a set of 12 loose maps for more detailed study in class and at home. In grades 4 thru 7, the emphasis is on physical geography. That of the USSR and the world, of whose land surface it forms so large a part. But in grades 8 and 9, the emphasis shifts to economic geography. How many American secondary students get anything approaching a real knowledge of the geography of the heavy industry of their country? Or of the geography of its rural economy, of its light industry, of its transportation? All of this and more too is required of the ninth grade Sovieteer.

For this greatly vaster achievement in the humanities with which the Soviet adolescent finishes his schooling in ten years as against the twelve for ours, Dr. Chase advances four basic reasons, of which these two are of urgent importance to us:





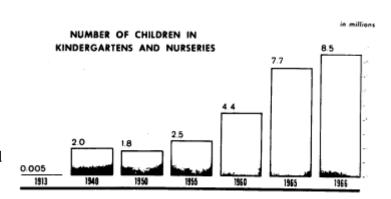


- (a) Soviet children are taught to read so efficiently and effectively during their first four grades that they are prepared to study literature, history and geography on a surprisingly mature level. (surprising to us, that is!)
- (b) Soviet textbooks are carefully written by competent scholars.

To which this commentator's reaction is: "Congratulations, Ivan. good luck, Katinka." Would that both (a) and (b) obtained over here-as they so easily could. All we would need to do would be to make English print as easy for our children to decipher as is Russian print for their Soviet agemates.

But nothing short of this overhauling will do it. The child who has to violate his higher mental attributes his sense of analogy, of cause and effect, of the inherent relationship of things – on the like of *or*, *our*, *more*, *soar*, *door* – *bite*, *light*, *height*, *cite*, *knight*, *indict*, isn't going to be able to read so efficiently and effectively at the end of grade four that he can study literature, history, geography on a level anywhere nearly as mature as does his Russian counterpart. But respell these atrocities as *for*, *mor*, *sor*, *dor*, *kor*, and subject all the rest of his school vocabulary to the same wun-sound-wun-sien treatment and how long before our Johnny and Jane would be studying i their humanities neck to neck with Ivan and Katinka and before long competent American scholars would be writing the textbooks requisite for that.

It would be a very simple operation and one which China is in the process of achieving right now. And which Turkey achieved back in 1929, tho she had to discard the sacred Arab alphabet, the alphbeta of the Koran to do it. An operation, moreover, which would win for us the gratitude of the whole civilized world. For willynilly, the civilized world has to accept English as the



indispensable medium of its industry and commerce, and subject a high proportion of its school children to the tortuous learning of its insane orthography. Why not make both the foreign children and our own happy with such a spelling as this:

Never let a kworul groe oeld Or eg yoek on a plaet groe koeld. Boeth wil haarden hwiel yoo waet Stuk too feelingz or too plaet.

The Dishwasher's Doodle, by Frances Gettleman

4. Research Indicates i.t.a. Successful, by Ivan Rose*

*Project Director

Recently, some criticism of the i.t.a. reading research projects has been made throughout the United States. The main concern was the use of different readers used by the experimental and control groups. In her recent book, Dr. Chall states:

The American children learning i.t.a. use the i/t/a Series, a new set of readers which not only emphasizes the early learning of the 44 i.t.a. characters and the sounds they represent but also introduces writing at the start and teaches more words, level for level, than either the British i.t.a. readers or the American conventional basal readers.

Thus the American demonstration involves:

i.t.a. + versus T. O. +
harder readers +
early and heavy phonics +
early writing readers +
practically no writing

For this reason, we cannot attribute the results attained by the experimental group to the use of i.t.a. alone; all other differences must also be considered. [1]

In an attempt to obviate the criticism, the Stockton Unified School District conducted an i.t.a. research project in which the linguistic stimuli present to the i.t.a. children and the children using traditional print was the same. Both groups used the Scott, Foresman i.t.a. and T.O. readers.

Twenty i.t.a. experimental and 20 T.O. control research classes were established in the Stockton Unified School District, Tracy Public Schools, and the Catholic Diocese of Stockton to discover the effectiveness of i.t.a. with bilingual Mexican-American children. Since the 40 classes were located in deprived areas, the project also provided information on i.t.a.'s effectiveness with disadvantaged children.

Every attempt was made to equate the experimental and control classes. The ethnic composition, sex, intelligence, readiness for reading, social-emotional maturation, and motor coordination was approximately equal for all 40 classes. To determine intelligence and readiness for reading, the i.t.a. and T.O. research classes were administered the Lorge-Thorndike Intelligence Test and the Lee-Clark Readiness Test in Sept. 1966. The results listed in Table 1 illustrate the careful matching of the i.t.a. and T.O. Classes.

Table 1

Intelligence and Readiness Tests Results for i.t.a. Experimental and T.O. Control Classes, Stockton, Calif. i.t.a. Project, Sept. 1966.

	Lorge-Thorndike	Lee-Clark Reading Readiness	N
	Mean I.Q.	Mean Raw Score	
i.t.a.	88.1	50.0	364
T.O.	88.2	49.9	421

In May, 1967, the research classes were administered the First Grade Stanford Achievement Test. The 20 i.t.a. experimental classes were administered the to s t i n i.t.a. since the majority of these students had not made the transfer to the traditional alphabet. The T.O. control classes were administered the test in T.O. The results of this test are illustrated in Table 2.

Table 2

Stanford Achievement Total Reading Scores for i.t.a. and T.O. Research Groups in Lower Socio-Economic Areas, Stockton, Calif. i.t.a. Project.

	Total Adjusted	Converted Grade Scores		
	Mean Raw Scores*	Mean	Q1	Q3
i.t.a.	35	1.7	1.4	1.9
T.O.	28	1.6	1.4	1.7

^{*}Difference significant at .01 level

Conclusions

The results of the research project conducted in Stockton clearly indicate that the reading achievement of the i.t.a. experimental group is significantly ahead of the T.O. control group. Since the basal reading material was same for both groups, critics of i.t.a. should be able to look favorably upon i.t.a. as a successful way to teach reading to lower socio-economical level students.

Since this project worked with students whose average ability was considerably below normal, a second year in the project should provide even more data to support i.t.a. as an effective beginning reading technique. At this writing, the i.t.a. children seem to be increasing their initial advantage over the T.O. control group.

[1] Chall, Jeanne. "Experimental Evidence," *Learning to Read: The Great Debate*, p. 124, McGraw Hill, Inc. 1967.

5. The Fateful Moment, by Helen Bowyer

If you have a World Almanac handy, open it at page 193, the beginning of its invaluable compilation of Memorable Dates from 4000 B.C. through November 11, 1965 A.D. Midway through the list comes 1906 of our era for which the Almanac records two spectacular occurances – the San Francisco earthquake and the shooting of the famous architect, Stanford White by the millionaire Harry K.Thaw. The former event is still tragic in the memory of men and women in their sixties or seventies whose parents, children, husbands, wives, brothers or other dear ones were among the 432 killed in that frightful breakthrough of the untamed forces beneath the surface of our earth. There are elderlies, too, who still suffer from the injuries or disfigurements it strewed in its wake, or who are still adversely affected by the \$350,000,000 loss the city sustained. But to most of the adults and juveniles who now proudly call San Francisco their hometown, that inferno of 61 years ago is of less interest than the permissible length of the mini-skirt in the classroom or the permissible hair length of the adolescent male. As for the Stanford Whites and the Harry K. Thaws, and the women over whom they shoot one another, well, most of the 5906 years between the first and last of these memorable dates have known comparable occurances and the next five millenniums will probably keep on knowing them.

However, 1906 witnessed an event which this current Almanac failed to record. An event so tragic in its lost possibilities that not even the San Francisco earthquake compares to it. For the swift decapitation of its promise has denied to scores of millions of men, women and children a boon that might have simplified and enriched their lives beyond any other event of that year. And, not impossibly, of any of the 61 years since.

For, beginning with the picture books of our pre-school moppets, it would have stimulated, not suppressed, whatever sense of logic each had brought from birth. Continued through their primarygrade readers; their elementary school histories, geographies, literature and science books, it would have developed, not repressed, those higher human attributes – consistency, the recognition of analogy, of the sequence of cause and effect, of the inherent relationship of things – on which such human wellbeing as our past has known, has been based. And on which our future must be based even more if we are to cope with the complex conditions now on our horizon. With the end of the school year 1914-that tragic 1914 that saw the outbreak of World War One – we might have had some 17,000,000 school children on a mental and emotional level such as we had never yet known. And haven't known since. And along with them, a comparable number in our sister Anglo-Saxon lands. And before that tragic 1939 which saw the outbreak of World War II, these numbers might well have reached the magnitude, the maturity, and the world influence to forestall that holocaust and make unthinkable that Third War on whose brink we may be teetering now.

What was this event to which I ascribe such stupendous possibilities? Something seemingly so simple that.... But then, how many of humanity's most stupendous blessings have not grown from beginnings just as simple? In brief, on August 27, 1906, Theodore Roosevelt, President of these United States, issued an order to the Public Printer that in all future publications of the Executive Department of the Government, he should use a list of 300 spellings recommended by the Simplified Spelling Board. Tho many of them, such as *catalog, center, honor, jail, labor, program, tho, thru*, were so easily recognizable as to cause no trouble to any reasonably literate citizen, a beligerant Congress refused to support the President and he felt compelled to rescind his order and have the Public Printer return to the customary *catalogue, centre, honour, gaol, labour, programme, though, through*.

Well, what was there so disastrous about that? – about the failure of 300 words out of our hundreds of thousands to get themselves simplified? Just this: they were words that would so frequently meet the eye of the ordinary citizen – on Post Office forms, tax returns, army and navy papers, pamphlets from the Department of Agriculture, Bureau of Health, etc. that he would soon be accepting them as natural and proper and wondering why under Heaven their sound common sense shouldn't extend to thousands of words more. Wondering too, why his little Jim or Betty should have to struggle with a buy, rye, sigh which would so much better be bie, rie, sae, and with a yacht and knot which should obviously model themselves on their rhyme word: dot. Letters to this effect would soon be reaching the White House by the bushel, and T.R.'s next order to the Public Printer might well have been for the simplification of 3000 words more.

For the simplification of these, he would probably have turned again to the Simpler Spelling Board and they would undoubtedly have done their selecting with the school largely in mind. These 3300 words together with the everyday ones which need no simplifying – this, that, hut, shut, rink, brink, see, seed, etc. would have raised the reading vocabulary of our primary grades to somewhere near the 8000 words of phonemic Russia's and given our youngsters a chance at that level of reading in our English print to which their Soviet grade mates get in their Cyrillic. And had that happened here, would Britain, Canada, Australia, New Zealand, have remained an inch behind us? Indeed, wouldn't we have seen, all that six decades ago, the formation of an Inter-English Commission sworn to the elimination of every mal-phonetic word in every text-book of every school in all our five native English lands? These texts would be about all the Commission would have to actively cope with. It could leave it to the youngsters to missionary their families. Back in 1960-61 in the one class in our whole land then using phonemic spelling (Helen Bonnema's morning kindergarten in the Edgewater School in Denver) some eager, happy five-year-old would come dancing in with "I read Goldiloks to my Gramma last night." Cant you see that Gramma relaying this miracle to the next meeting of her Bridge Club, and outlining the magic alphabet which made it possible? In that otherwise benighted year, Dr. Bonnema and her kindergarten teacher had to sit up nights transliterating and mimeographing Goldiloks and Tom Thum, Snoe Whiet, and The Ugli Dukling for their 40 little pioneers, but today, had Congress gone along with the President, their present unregenerate spelling would be hiding itself in appropriate museums, and the whole vast heritage of fairy tale, hero story, myth, song and singing game would be coming to the Anglo-American child in a medium whose mechanics he could master in even less time than the Russki beginner spends on his alphabet book. Not that our beginners are any brighter, but that – freed of the curse of its erratic spelling – the mechanics of English would be much simpler than that of Russian.

Most of the Congressmen who opposed T.R.'s innovation are dead now. So are most of the State and local education authorities, college professors, textbook writers and publishers who could so easily have overriden this opposition, but didn't. Most of both categories, doubtless went to their graves without the least consciousness of the wrong they had done their country.

And how much more conscious, this 61 years later, are their successors in Congress, in education, in textbook writing and publishing? To be sure, they profess dissatisfaction with our schools, most of it centering around the fact that "Johnny can't read." And each year they turn out tons and acres of print explaining why he can't and what to do to remedy the situation. The remedies range from genius teachers and smaller classes to unscrewing the seats from the floor so that they can be bunched or circled in a chummier array. But does the U.S.S.R. produce enough genius to supply all her young with surpassingly gifted instructors? Are her classes sizes significantly smaller? Has she changed the fixed and orderly arrangement of the children's desks? Yet by the end of grade 4, the teaching of reading, as such, is over. Its mechanics are now well mastered, in spite of the fact that

Russian is highly inflected and its grammar and syntax so much more complex than ours. As for what fills their Russian language studies from fourth grade on, you have only to read Arther S. Trace's "What Ivan Knows that Johnny Doesn't" to be astonished at the level of the literature – Pushkin, Turgrenev, Krylov, Tolstoy, Gorky, & Alymov, they begin in Grade five – at the age of 11 or 12. Compare this with what you find in our American Fifth Grade Readers.

The child population of the U.S.S.R. is greater than ours. It gets such health care from conception on, that the Russian death rate is now significantly lower than ours. It grows up in an environment which has only 1.5% illiteracy, and that almost entirely among its severely sub-normal and its very old. An environment in which not only is education free clear through university and professional school, but in which all students who need it get a living allowance sufficient to free them from economic worry. Thru tenth grade, moreover, Ivan's out of school hours are enriched by a network of voluntary clubs and organizations in which he can find something of absorbing interest, be his mind slant what it may. Add to this that – thus far – there has been so little unemployment, that he grows up confident there's a job awaiting for him. Moreover, divorce is so rare and family life so stable that juvenile delinquency is much more rare than here.

Whatever in our American way of life may offset most of these advantages for the Soviet child, there is nothing to compensate ours for the chaos of the spelling to which we so uncalculatingly subject his mind and emotions. But with this the SPB has dealt again and again, and in any case most of our subscribers are of an intellectual and temperamental level to be informed on it. So let's get back to that order of T.R.'s.

The babies of that year became the parents of the children of the Great Depression from which we escaped only to the madness of World War II. *Could* the success of T. R.'s move have prevented that madness? There is much to be said for that possibility. The world had long been desperately in need for a *lingua franca*, a language which every man, woman and child on it should speak, read and rite in addition to his own. One that each had known and loved from the blocks and picture books of his babyhood thru the school years when ten-year old Boris of Bulgaria would be corresponding with his agemates, Chet in Chicago, Abdul in Morocco, and Angelita in the Argentine. A correspondence which the schools would take so seriously that it would hold high priority in the teaching of *this lingua franca*. For its primary purpose would be that the children of this war-besoted old world should now grow up liking and understanding one another, and in possession of, a common language in which they could peaceably thresh out such differences of interests and attitudes as were bound to arise from time to time.

T. R.'s move for simplification, if accepted and duly developed here at home, would almost certainly have made English that *lingua franca*. Not only was it, even then, the Number One language of world commerce and industry, it was also Number One among the Western tongues in the simplicity of its grammar and syntax, and the fewness of its inflections. In spite of its spelling, it was perforce studied by more millions of children and youth abroad than any other foreign language, and I've often wondered if that *whole*, *goal*, *soul*, *pole*, *roll* of ours, and that *laughter*, *rafter* – *daughter*, *water* – *air hear*, *rare*, *prayer*, hasn't been one root of the general suspicion and dislike of us Anglo-Americans thruout the world. Any people who'd put up with such a crazy spelling, well!.... All children crave, however subconsciously, a dependable relation between sound and sign, and who knows what goes on in the young foreigner's mind when this relationship fails him so often as it does in English?

Ten Presidents have occupied the White House since T. R., but if any one of them has made a comparable move, the *Bulletin* hasn't heard of it. Even tho as recently as 1962, our world-famous

novelist, Upton Sinclair, sent President Kennedy a letter in which he said, "What I invite you to do will imortalize your name as much as if you had written the Declaration of Independence. Select a group of scholars who have studied the problem of spelling reform, give them a staff and the necessary funds and commission them to lay out a program of spelling reform within a reasonable time. There will follow of course, world-wide discussion and controversy, which is all to the good, for it is the process of preparing the public mind for a world wide change. When the Commission submits its program, put it into effect in public printing, and in your own and other official statements The newspapers cannot refuse to print them... and it will not be long before the public gets over the shock and realizes the nightmare from which it has been awakened."

"There is nobody who can do this job but you, Mr. President, and there is little chance that you could do anything else that would give such benefit to the human race."

But the President's reply – and that through a secretary – was that he would turn the matter over to the Office of Education. There was a time (back in 1893) when the office of Education was so deeply interested in spelling that it issued the invaluable *Circular of Information* No. 8, which is all but the Bible – to that date – of the serious student of spelling reform. But nothing like that interest showed itself in the attitude of the Office in 1963.

A commission such as Mr. Sinclair asked could equally well be originated by Congress, and this Circular No. 8 records the introduction of various Bills with this in view introduced in the 1880's and earliest 1890's. One of them, in the Fiftieth Congress in 1887, prescribed that it should take effect in all the schools of the territories, those of the District of Columbia, and on the U.S. Naval and Military Academies. Had that Bill passed into law, how long would it have been before every State of the Union had lined up its schools with those of the Territories – and how much bewailing of Johnny's reading would we be hearing today? But no such Bill ever got enacted into law, and save for those lucky little primaries – some eighty thousand of them, perhaps – who are *lurning too reed* thru the Pitman i.t.a., we are still subjecting our children "to the fearful waste of time in learning the most illogical spelling, probably, that this world has ever seen; the only real result being to weary them of books and to blunt their reasoning faculties" (The words of the Hon. Andrew D. White, former Pres. of Cornell Univ., Minister to Germany, etc. as quoted in Circular No. 8, page 49.)

Can we still hope for action from the President or Congress? At least one of our *Bulletin* Subscribers remains undaunted. Even before its first number appeared in the Spring of 1961, Homer W. Wood of Porterville, Calif. had a Congressman introducing a Bill to create a National Spelling Commission, and every year since he has done the same. Tho always thus far, it has stayed buried in the Education Sub-Committee of the House, who knows? His address is *The Porterville Evening Recorder*, *P. O. Box 151*, Porterville, Calif. Why not send him a line of sympathy and encouragement? And if you have any other ideas for getting phonemic spelling into the heads of actual children in actual classrooms, why not write the *Bulletin* about it? No alphabet, however good, will do this of itself – back of it must be human energies and perseverance which thus far, in this country seem to be in very short supply.

6. On English Spelling, by William J. Reed*

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Some people would die before they would really *think* and many of them do; but these presumably are not readers of *The Head Teachers Review*, who can think, do, and must.

Research has repeatedly shown that an inconsistent spelling is a serious obstacle to children's education, especially in the early stages; because spelling is the key to all reading and all writing and therefore the key to all education from the infant school to the university.

Our civilization has had 3,000 years of successful spelling reform. Western Semitic nations and the early Greeks devised phonetic alphabets and so made obsolete the earlier ideographic writing. Since that time, constant efforts have been made in many countries to keep spelling in accord with pronunciation. In recent times, the English and French have lagged behind most other nations in this respect, but Sir William Craigie has shown (Some Anomalies of English Spelling, Clarendon, 1942) how our Old English and Middle English words have had their spellings altered in accordance with changed pronunciation. "Such changes have frequently been made in various languages, as they were in the earlier stages of English, without finding any difficulty in meeting with general acceptance." Phonetic spelling is the rule in nearly all the important languages of the world. It underlies most English words – even such unlikely looking words as: knee, enough, and rough, which were good phonetic spellings of earlier pronunciations which have now ceased to exist. Language is a living thing; it must develop or die. When spelling becomes hopelessly out-of-date it is more of a nuisance than it is worth. Spelling reform has taken place in most parts of the world. Nowhere has it prevented local dialects from continuing to be spoken, nor has it cut off people from the literature of the past.

Old English had good phonetic spelling with 18 vowels and adequate consonants. Deterioration followed in three main phases. During the period following the Norman Conquest and especially during the 13th and 14th centuries, English words were re-spelled by French speaking scribes partly according to French spelling conventions; thus hús (rhyming with modern loose) was re-spelled hous and later house, hwif has become white, hwá has become who, hwéol is wheel, and cwén is now queen. During the 16th century (mostly) "latinisers" deliberately changed the spelling of many words to make them look more like the classical words from which they were thought, rightly or wrongly, to be derived. Thus the *s* in island was inserted so that certain people could be reminded of the Latin insula; the *l* was put into fault so that these people could be reminded of the Latin fallere; the French also put an *l* into their corresponding word but had enough sense to drop it again so that their word is now faute. During the last 250 years, thousands of commercial and scientific words have been adopted, and the spelling of these often presents some special difficulties.

For these reasons, and because printers were inconsistent in their use of letters, English spelling has suffered severely, and it is now highly inconsistent. We have 22 ways of spelling the long *i* sound (bite, might, height, I, eye, aye, etc.) and 20 ways of spelling the short *i* sound (sit, pretty, woman, image, mountain, etc.) The letter *a* can represent any one of eight sounds, as in *a*t, *a*ll, *a*sk, *a*bout, many, was, area, and cottage. There are 17 different ways of spelling the sound usually represented by *sh* (rush, special, mission, nation, ocean, sure, etc.). This chaotic use of letters is largely responsible for the failure of many children to master their own language. Both reading and spelling

have become a guessing game. The winner is the one who develops a photographic memory (á la Chinese).

Hence our standards of literacy are not as high as they should be. Some children learn to read well in the infant school. Some learn to read before they go to school. But some cannot read properly when they leave the junior school. At the secondary school there is still trouble. If we read David Holbrook's "English for the rejected" we cannot fail to see how difficult our language is made for the non-academic child.

Experimenters in various parts of the world have shown that children, when they use a phonetically consistent medium, learn to read and write English quicker and better than children in the corresponding control groups using what is euphemistically called "traditional orthography." Pitman's i.t.a. and the Colour Factor methods all attempt to use consistent spelling, and they have achieved notable success.

Delinquency is often associated with a low standard of literacy, so it is reasonable to expect that whatever we do to improve the latter will by the same process remedy the former. In all school experiments with reformed spelling it has been found that behavior improves along with self confidence. Few persons have claimed that our frustrating spelling is the cause of delinquency but reading failure usually precedes delinquency. Why must these children be allowed to suffer because of certain adults who do not know or do not care?

The case for spelling reform has been proved over and over again. After nearly a century of compulsory education in England, it is surely time the spelling problem was tackled seriously. The first essential in a really good system of education is a consistent and therefore efficient way of spelling our native language. To have letters which can represent any one of several different sounds is as unfair as it would be in arithmetic to have a figure such as 3 which sometimes meant 3, sometimes meant 4, and might mean 5, 6 or 7. We ought not to waste our children's time or destroy their inborn sense of logical reasoning.

Henry Bradley wrote (*Spoken and Written Language*, Oxford Univ. Press 1913, page 22): "The waste of time in education caused by the want of consistent relation between the written and the spoken word is a serious evil which urgently calls for a remedy." Walter Wm. Skeat wrote (*Principles of English Etymology*, vol. 1, page 296): "It is surely a national disgrace to us to find that the wildest arguments concerning English spelling and etymology are being used – even by supposedly educated persons – whose ignorance of Early English pronunciation and of modern English phonetics is so complete that they have no suspicion whatever of the amazing worthlessness of their ludicrous utterances:' Prof. W. W. Skeat, Lit. D., L.L.D., Ph.D., D.C.T., founded the Simplified Spelling Society in 1908.

Advertising agents are changing our spelling, as the big stores are changing our grammar (apostrophe and capital letters). Changes must come; scholars and teachers who love our language and literature have a right to be consulted about what these changes shall be; and they have a duty to express their opinions about our native language and how it should be communicated to the children in our schools. Why don't you be one of them?

7. On devising a Minimal Change System of Simplified Spelling, by Frank T. Du Feu*

*Jersey, C.I., Eng.

Please read carefully the following 24 short sentences:

- 1. In a violent storm on Tuesday a trawler sank in the river near the jetty.
- 2. True, we can go together to the bird sanctuary in the park tomorrow morning.
- 3. The teacher flatly refused to accept the boy's reason for being late twice on the same day.
- 4. A weak depression west of Scotland is drifting east and filling slowly.
- 5. Richard declined the firm's annual gratuity on the grounds that he did not need it.
- 6. A conviction will certainly ruin the driver of the taxi involved in the accident.
- 7. It is unlikely that those plants will grow well in such a poor soil; indeed they may die.
- 8. That magnificent sideboard will fetch a big price at the auction sale here in June.
- 9. In compliance with the terms of the agreement the shopkeeper will get in a stock of our modern tools.
- 10. His eldest son is quite satisfied with his job in the Department of Agriculture.
- 11. The officer waited for the foe to get nearer before ordering his men to fire.
- 12. After eating his meal the customer began to argue with the waiter about the bill.
- 13. We saw that we had no choice but to reject the evidence from the boy's sister.
- 14. Care must be taken in the drafting of these special instructions to the surveyor.
- 15. Our club captain will be rowing in the Diamond Sculls at the Regatta for the second time.
- 16. They hope soon to solve the mystery of the derailment of the express train near Denver.
- 17. An independent candidate denounced the treaty in strong terms.
- 18. In gratitude for the safe return of their poodle the children sent a gift to the animal shelter.
- 19. As expected the destroyer will remain in the floating dock for about five weeks.
- 20. The man replied reluctantly to a few questions on the subject of his wife's extravagance.
- 21. Their policy of curtailing grants to County Councils for road maintenance is very unwise.
- 22. For a rock garden to succeed it must be constructed on a site that drains well.
- 23. Under the feudal system barons held lands in return for providing the king with men to support him.
- 24. The consequences of such a severe financial loss may be more far-reaching than we suppose.

It is hardly necessary to point out that these sentences are in T.O. But T.O. on its very best behavior. For ar is always pronounced as in far, ea as in meal, ie as in die, oo as in soon, ou as in about, ow as in slowly, ch as in such, g is never soft as in gem, h is never mute as in hour, and so on.

Indeed, they are also written in the author's Revised Spelling which does what every minimal-change system of simplified spelling should do. It makes the greatest possible use of the letters and digraphs of T.O. and respells those words only (about 30 out of 100) that do not conform to the phonetic pattern adumbrated by the words used in the sentences.

Unfortunately, two sounds have had to be left out of the sentences altogether. One is the vowel heard in the first and last words of the proverb *good wine needs no bush*, the other is the consonant heard at the beginning and at the ending of *thirtieth*.

The vowel is represented in Revised Spelling by *uo*, a digraph which is a compromise between *oo* and *u*; while the consonant is represented by *thh*, a spelling devised by Dr. Godfrey Dewey and which, though rather clumsy, three letters being needed for a simple consonant sound, has the merit

that it leaves *th* for the much commoner sound heard in *the*, *that*, *this*, *other*, *with*, *etc*. and, incidentally, gives a very simple rule for forming the plural of a noun like *path*: replace the second *h* by *s*, thus, *pathh*, *paths*.

The devising of rules in accordance with which the thirty out of a hundred irregular words referred to above are to be respelt is, of course, the most difficult problem facing the minimal-change spelling reformer, because the best way to respell a word is not by any means always obvious. Spelling a sound with one particular digraph may cause repercussions in other words with this sound.

For example, because the digraph *ea* represents the sound in *meal* far more frequently than it represents any other sound, it will be retained for that particular sound in this minimal-change system of spelling reform. Moreover, the words in which *ea* is pronounced as in *leather* do not present much difficulty, because, in dropping the *a* we are nearly always restoring the Middle English spelling of the word and, incidentally, falling in line with Pitnan's i.t.a. and World English spelling.

But how are words like *break* and *great* to be respelt? Are we to replace *ea* by *ei*, *ae* or *ai*? In Revised Spelling we have preferred the first alternative because one of the words in this minority group, namely, *steak*, was spelt *steike* in Middle English and indeed, all the words in the group are spelt with *ei* in the International Phonetic Notation today.

We have now commented on five of the 45 principle respelling rules listed below: 11, 16, 17, 39 and 40.

A few words are needed to explain number 1. In a previous article in the *Spelling Progress Bulletin*, we argued that the *soft-c* must be retained in any minimal-change system of reform because so many additional words would have to be respelt if it were disallowed that the resulting system would not be minimal-change at all.

Other changes that are obviously needed are: the unnecessary silent letters in more than 100 words are omitted, as these seldom present any problem. F replaces ph and gh when so sounded. K and sh replace ch when it has these sounds.

The Principle Respelling Rules of Revised Spelling

-ce for -se	13. transvaal banaanas	aa for a
-d for -ed	14. aepricot sundae	ae for a
f for gh	15. smaull fault	au for a
f for ph	16. hevy swell	c for ea
g for gu	17. greit vein	ei for ea
omitted h	18. seazd leader	ea for ei
j for g	19. obsolete submarene	e-e for i-e
k for ch	20. reecent speech	ee for e
sh for ch	21. unweeldy fleet	ee for ie
-ss for -s	22. uncertin ernings	er for ear
thh for th	23. expensiv muslin	i for i-e
w for u	24. solid siv	i for ie
	25. tieny magpie	ie for i
	26. drie supplies	-ie for -y
	-d for -ed f for gh f for ph g for gu omitted h j for g k for ch sh for ch -ss for -s thh for th	-d for -ed for gh 15. smaull fault 16. hevy swell 16. hevy swell 17. greit vein 18. seazd leader 19. obsolete submarene 19. obsolete

27. dog wotch	o for a	35. Dutch uven	u for o
28. hoary memoarial	oa(r) for $o(r)$	36. yung hunter	u for ou
29. oeld foes	oe for o	37. valued stuedent	ue for u
30. troop moovements	oo for o	38. Tuesday cruese	ue for ui
31. soop spoon	oo for ou	39. guod buokings	uo for oo
32. quarterly report	or for at	40. shuogar outpuot	uo for u
33. county toun	ou for ow	41. church wurker	ur for or
34. own powltry	ow for ou	42. turf jurnal	ur for our
		43. handy recipy	-y for -e
		44. smoky chimny	-y for -ey
		45. dyed nyelon	ye for y

It should be noted that in all the above rules there is one original spelling using the letter or digraph as an example for the accompanying respelt word.

As in all things made by man, the proof of the pudding is the taste thereof. We hope you like the humorous poem which follows in the Revised Spelling.

The Penitent, by Frank T. Du Feu

Mie name is Hoity; too begin, Lamented Toity wos mie twin. We livd in Jersy. Our abode, A haunted cottaje off the road That stuod amung deserted graves On barren land enclosed bie staves. Our den had windows but no doar, With just a not-hole in the floar For uss too enter in and leave, As stranjers we did not receave. A blud-staind ax, a seecret chiart. Sum shrunken heds; that leethhal dart The witch at Endor gave too Saul, And buoks on majic lined the waull; While with a spie-glass we cuod see The screech-oul in the waulnut tree.

Wun Haloww-een, coeld, wet and wield, We disinterd a still-born chield, Rapt up its entrails in a clothh And braut them back too make the brothh, In which we puot, when on the boil, Yew, garlic, puff-baulls, noxious soil, And stird the mixture, when too thhick, With Toity's faevorit blackthhorn stick; Then as the cauldron hissd and steamd, We mutterd curces and blasfemd, Invoking aull the feends of Hell. Resolvd too cast a poetent spell, Mie sister, chaenjd intoo a frog, Wos promptly eaten bie a dog,

Our muther helpd with thiss and that. She groomd the he-goat, fed the cat, And lernt wun stormy afternoon The art of drawing doun the moon, For when the thhirteen came our way, She made them welcum for the day. Respected as the majistrate, Our faather wos a bit sedate, But kiend and scruepulously fair; He kept our brooms in guod repair, Helpd uss too gather lizards, snakes, Toads, nietshade, poisond kittywakes, And aulways joind uss with a will In seeking teethh on Gallows Hill.

Hoose owner wept too no avail, Dad gave her twenty munthhs in jail.

Convinced that witchcraft didn't pay, With lives like Toity's thhrown away, I left oeld Saetan in the lurch, Too wurship wunce again in church, And gave the Rector, plaged with gout, Sum bottles too keep the eevil out; Then, with a face-lift like the rich, Yoo'd never thhink I'd been a witch; Short-sieted peeple – on mie life!-Mistake me for the verjer's wife.

Book Reviews

8. The Many Hues of English; & The Story of the English Language, by Mario Pei Reviewed by Abraham Tauber, Ph.D.*

*University Professor of Speech, Yeshiva College, New York, N.Y. *The Many Hues of English, pub.* by Alfred Knopf, 1967. \$4.95. *The Story of the English Language, pub.* by Lippincott, 1967. \$6.95.

The writings of Mario Pei on language and linguistics are so well known and widely admired that they need no further praise from this reviewer, in this journal, and to this audience. Praised by George Bernard Shaw for a "prodigious memory and knowledge" that reminded GBS of Isaac Newton, Dr. Pei has probably done more to arouse public interest and stimulate scholarly activity in language than any man since H. L. Mencken. His many writings (*The Story of Language* was a Book-of-the-Month Club selection), his professional status (Professor of Romance Languages at Columbia since 1937), and his practical assistance to so many in the field of linguistics (linguistic consultant to the U. S. Army Language School in Monterey, Calif.; collaborator with the Offices of Stragetic Services and War Information in the preparation of linguistic projects connected with the World War II war effort; founder of the American Society of Geolinguistics) have brought him recognition as one of the foremost authorities on language living today.

The Many Hues of English is an updated collection of Dr. Pei's encyclopedic writings on language, which have appeared in such journals as The New York Times Book Review, Saturday Review, American Speech, Holiday, Modern Language Journal, International Language Review, Tomorrow, Think, Challenge, Police, Symposium, Saint Anthony Messenger, Sounding Board, etc. The sections include such inviting titles as Varieties of English, The Flux of English, Usage and the Dictionary, and employ such intriguing chapter headings as Your Language Says More Than You Think, pidgin English Around the World, Have We Too Many Words, Changing Times – Changing Words, Shall We Bring English up to Date?, Leave Your Language Alone, Chamber of Horrors, Usage and Abusage, A Loss for Words, One World – One Language?, and English in 2067: A Forecast. Unfortunately, this otherwise excellent collection lacks an index to guide one through the labyrinth of its riches, if one wishes to proceed in that way.

An index is included in *The Story of the English Language*, the revised version of Pei's earlier work of 1952. This enables one to delve into this compendium or taste its varied delicacies, or traverse its rivulets and streams of history (and "prehistory"). So much has been added to bring up to date what has happened and is happening to our incredibly vital language that 40% of the material had to be revised over the earlier edition of *The Story of English*, (including a new chapter on *The American Language*, and the future). The New York Times Book Review, in a review by J. Donald Adams, its former editor, praised the book extravagantly, and earlier called it "an engrossing narrative, a clear, interesting account of the development of a great language, from small tribal Anglo-Saxon to large cosmopolitan English."

This book also includes a bibliographic "List of Works Most Frequently Consulted," among which, this reviewer was pleased and flattered to find, was his own *Shaw on Language* (Philosophical Library, 1963). (As a matter of even greater personal pride, Dr. Pei has written the Preface to this reviewer's book on the history of spelling reform movements in the English-speaking world, to be published in 1968 by Philosophical Library.)

However, what would interest readers of this journal particularly are the references to spelling and spelling reform, which are legion. *The Many Hues of English* contains two chapters dealing exclusively with spelling reform (A Standard for English, and The Problem of Spelling Reform), with other scattered references. *The Story of the English Language* concentrates its discussion in a

similarly titled chapter ("The Problem of Spelling Reform," which is unfortunately not listed in the index as beginning on page 337) and has innumerable other allusions to the orthography of English.

As Dr.Pei has said, in the Preface referred to above, his fascination and concern with the English language are related to the fact that it was his second language, enabling him to see it objectively and in a way that native users of English rarely appreciate. (He came to the U.S.A. from Italy as a boy.)

Dr. Pei comes out squarely for the necessity of spelling reform in English, for a variety of reasons, including the ease of attaining literacy and learning to read, in English-speaking countries, as well as the tremendous advantage English would gain in acceptance by other peoples, and in use in other language cultures. It seems to this reviewer that Dr. Pei makes too much of a need for "standardization" of pronunciation in order to achieve a "phonetization" of the English language in its spelling.

These problems have been practically resolved by the (American) Simpler (not "Simplified"), as on page 74 of *The Many Hues*, but correctly listed in *The Story*) Spelling Association, and its (British) Simplified Spelling Society counterpart (not "branch"; as it is called on page 74 in *The Many Hues*, tho corrected again in *The Story*). These organizations have managed to develop and agree upon New Spelling and World English Spelling, without splitting heads over the divergences in English pronunciation, concentrating on unity in the language as spoken on both sides of the Atlantic and Pacific, rather than on the differences. The possibility of agreement happens, too, because they proceed on a *phonemic*, rather than a phonetic basis, allowing flexibility and reasonable consistency and simplicity of their spelling reform notation-code. By the use of digraphs, they both remain within the limits of the present 26 letter Roman alphabet, and thus are able to avoid the necessity of devising new characters. Pei's suggestions-observations founder on his use of X (for sh), C (for ch), and Q (for zh) sounds, using conventional graphemes for unfamiliar and unconventional phonemes not usually associated with them.

But these are pecadillos. Spelling reformers should be proud to number Mario Pei among them, and to harness his vast scholarship and enormous prestige to their cause. Then perhaps, we would make more progress in the cause that has just stubbed its toe at the U.N., on whether we gain peace and the promised land, by beating our swords into "ploughshares" or "plowshares," as the King James Version and Noah Webster preferred.

Editorial comment: the use of discarded letters, C, Q, and X, for unfamiliar, unconventional and unrelated phonemes is the mistake of many spelling reformers who do not investigate what others before them have done. In the research conducted by the Research Committee on Spelling reform, we uncovered more than 100 systems ranging from limited simplification intended to stay as close to T.O. as possible to systems which introduced new letters for the 18 or more sounds of English not now adequately represented by single characters and some (such as the Shaw Contest Alphabet and Deseret) which make 40 or more new letters. If any of these reformers had ever seen the Deseret Prayer Book or Rubi Oliv Foulk's Amxrikai Spek, they would have realized that such systems are unreadable without a lengthy study, and a tremendous amount of practice, and thus constitute a formidable handicap to the learner. Even the use of X and Q for totally unrelated sounds can be shown to constitute a serious handicap to readability and ease of learning, and a cause of considerable confusion (to those accustomed to T.O., at least) – just what the designer ought to be trying to avoid. Both Deseret and Foulk spent thousands of dollars to print their books when a one page leaflet printed in their system and shown to two dozen unbiased persons would have shown them the public's non-acceptance of such a system. Caveat fabricator!

9. The Genesis of Language: A Psycholinguistic Approach, reviewed by Ivor Darreg

The Genesis of Language. Proceedings of a conference on "Language Development in Children" sponsored by the National Institute of Child Health and Human Development, National Institutes of Health. Edited by Frank Smith and George A Miller. The M.I.T. PRESS, Massachusetts Institute of Technology, Cambridge, Mass. and London, Eng. 1966.

The preface to this anthology bears the dateline: Harvard Center for Cognitive Studies, Jan. 1966. The conference on which the book was based was held in April, 1965. Thus the book reflects a greatly accelerated interest in the practical application of linguistic principles, and a most encouraging interdisciplinary approach.

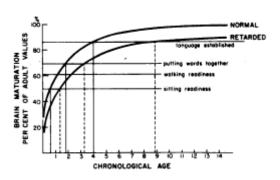
Before children can learn to read and write, they have to learn to speak. The acquisition of one's mother tongue "from scratch" is quite a different process from the attempt to teach foreign languages in the classroom indeed, the usual failures of language teaching in schools indicate that we must study *how* the preschool child acquires such a command of a language with *none of the conventional educational aids*.

The structure of the English language is far more intricate than the average person ever suspects. Yet this structure is "installed" in children at an early age, and they show signs of being able to apply logical principles to the extension of that structure, such as supplying verb-forms, plurals of nouns, etc. to words recently learned.

Besides the discussions from several angles (phonetics, psychology, syntax) of the acquisition of English as a native language, there is a discussion of the acquisition of Russian as a native language, supplemented by an extensive bibliography, even including abstracts, of Soviet studies in childhood language-learning. Russian is an extremely conservative language, having retained many of the original Indo-European inflectional endings, and exhibiting a grammatical structure as involved as that of Classical Latin. The chapter by Dan I. Slobin thus brings valuable information hitherto not available in this country, on how this structure is built up in the child's mind.

Several chapters by different authors give a well-rounded presentation of the process of acquiring the sound and phoneme system of one's mother-tongue. This process starts, of course, with babbling, a phase during which the sounds are not under any compulsion to convey meanings. Gradually the sounds not needed to speak the mother-tongue are disused and those that are needed are practised. Eric Lenneberg's chapter correlates the physiological aspects of the problem, such as brain development, with the language-acquisition period, which his chart designates as from ages 2 to 12. See fig. 5.

Fig. 5. Relationship between general rate of maturation of the brain, in per cent of mature values, to chronical age. The parameters are normal individuals and a typical case of a mentally defective individual. In the defective, developmental milestones fall farther and farther behind.



There seems to be general agreement by various authorities on the presence of a LAD (Language Acquisition Device) in the child-some kind of innate logical sense and ability to build up grammatical and syntactical patterns. Remarkably, this is done almost entirely by ear. Accordingly, the book contains considerable information on the problems of teaching the deaf child-apparently, with modern hearing aids and techniques, if an aid is fitted early enough, even a small amount of residual hearing will permit the motor feedback mechanisms to 'operate and understandable speech to result. The imperative need is for defective hearing to be discovered *as early as possible*.

The overall impression gained from this book is that the pre-literate child's language competence – his vocabulary, and his ability to apply it – is far more sophisticated than generally admitted. This bears out and re-enforces the statements by various writers for this *Bulletin*, concerning the importance of not frustrating children with the trivial, silly reading material often inflicted on first grade moppets. That is, there must not be a feeling of having to begin another language (the written language) all over again from the very start-advantage should be taken of existing abilities. Why waste them?

The anthology concludes with a speculative account of a project to teach chimpanzees a substitute for language, to find out definitely why subhuman species do not have the power of speech in the human sense. It may be possible to prove that environment as well as intellectual development in the cerebrum are at the base of this lack of intelligible speech.

Comparisons are made between animal communication and the babbling of prelinguistic children. Actually, some animals have as many as 30 recognizable speech sounds, so are up in the age range of 18 month-old children.

10. Psycholinguistics: A Book of Readings, reviewed by Ivor Darreg*

*Ivor Darreg, Los Angeles, Calif.

Psycholinguistics: A Book of Readings, edited by Sol Saporta, Indiana Univ. with the assistance of Jarvis R. Bastian, Haskins Laboratories. Pub. by Holt, Rinehart and Winston, New York, 1966.

This anthology also has as its principal motive an interdisciplinary approach. This new method of attacking problems is a most hopeful sign; it indicates the dissolving of the walls and partitions that have separated many items of knowledge for so long – now these items can be assembled, under the new generalistic attitude, into really useful patterns.

Of special interest to the developers and teachers of writing systems is the multiple approach to the phoneme displayed in this book. The phoneme emerges as rather a metaphysical sort of abstraction; it is not necessarily present in the stream of sound *as heard*.

In some respects, the development of an alphabet, as opposed to a syllabary such as that of Sanskrit or Japanese, represents over-analysis. The audio spectrograph, and its companion instrument the pattern playback (which can sound out hand-drawn spectrograms) have revealed that the *transitions* between speech sounds are just as important, or even more important, than the instants that have been abstracted as being "the /d/ phoneme" or "the /g/ phoneme" for instance. Spectrograms reproduced in the book show quite clearly that the d in the syllable di is not the same as d in the syllable do, even though the articulation is similar. For g the differences are even more striking. What ties these different sounds into one phoneme is the *motor pattern of articulation* – apparently the articulatory habits learned by trying to imitate the sound as heard. Speech (and in particular, a word) is not a succession of discrete fenced-off entities such as the letters of the alphabet would lead us to believe. In the jargon of computer people, speech is analog, whereas writing is digital. Here is the key to the difficulty of learning to read and write. The letters are stills from a motion picture, and represent targets aimed for, rather than actual stopping-places.

A recent news item (*Electronic News*, Nov. 13, 1967) updates the information in this book, regarding Haskins Laboratories' and R.C.A. and others' research toward the development of speech-recognizing and -uttering machines, phonetic typewriters, and similar devices. The problems are intricate and thorny, but they must be solved, otherwise man-into-machine communication will not function as it should. From now on, writing, reading, and spelling will have to take machine compatibility into account. New economic and social pressures are operating in this field.

There is an important chapter applying the mathematical theory of communication (information theory) to speech as well as writing. This is a real milestone of progress, for there has been, till recently, an obsession with writing on the part of such theorists. Another chapter gives extensive statistical tables of articulation tests, experimenting with the relative ability to distinguish

^{*}Reprinted from New York State Education, Oct., 1967.

consonants spoken over various kinds of telephone lines. It turned out that a distorted speech such as that practiced by ventriloquists sounded quite normal over certain restricted-bandwidth telephone connections. The consonants tested were analyzed according to various factors, such as the voiced-vs-voiceless opposition, and it was found that the place of articulation, such as distinguishes p from k, was the least effective parameter. But words ending in p are easier to distinguish than words beginning with p – try peter-beater, lab-lap.

Besides the expected mention of structural linguistics; there is a revealing article on Serial Order in Behavior, by Lashley – the transposition of sounds, letters, and words is a frequent trial to educators, and produces such phenomena as typewriter errors and Spoonerisms.

The psychological approach is well represented by chapters on reference, meaning, semantics, context, and memorizing.

The Whorf hypothesis (that languages do our thinking for us) is well represented by an original B. L. Whorf article and by some replies of his critics. The controversy is by no means settled, and there is something to be said on both sides.

Bilingualism is covered in depth-the person who speaks two languages is not necessarily a good translator. Interference between the two languages is not as great as some have supposed.

Speech pathology, such as stuttering and aphasia, also receives consideration. The loss of syntactical and grammatical ability often mirrors in reverse the acquisition of these same abilities in childhood, and the recovery from aphasia is often akin to this childhood language-structure learning.

The last article in the book deals with the effect of language on the reproduction of visually perceived forms. Investigations and research of this sort should be helpful in the design of schoolbooks and teaching material combining pictures with text, or in the audiovisual aids field.

It is a most fortunate coincidence that these two anthologies appeared about the same time. They complement each other very well indeed. The proper co-ordination and interrelation of the data they now have brought together, will save many valuable man-hours for students and teachers alike.

11. Children Who Read Early, by Dolores Durkin, reviewed by Raymond E. Laurita°

Children Who Read Early, by Dolores Durkin, Teachers College Press, 1966. 174 pages.

Children Who Read Early, is a quiet and unpretentious book that attempts to dispute some of the cliched thinking that abounds in education for it dares to question the long-held notion that children who learn to read at an early age are somehow injured or that they will be confused or bored by their subsequent elementary experiences.

Dr. Durkin's report is the result of a six-year examination of two longitudinal studies of children who had learned to read prior to their arrival at school. The book isn't the easiest of reading for it presumes a degree of professionalism of those in education who will constitute the main body most interested in the results.

The most significant finding tends to the conclusion that, "The children who started to read at an earlier age entered first grade with superior reading achievement in reading; and they also maintain their lead over a five-year period. Such progress hardly supports the numerous proclamations of those who over the years have strongly discouraged pre-first grade help with reading for all children."

The study further indicates the advantage of early reading ability for the lower IQ child over his non-reading peers was greater than for the brighter child. Dr. Durkin hypothesizes that it might be due to the slower child's need for the additional time that his advanced ability provides for learning. An alternative hypothesis might be that the slower child, by learning to read equally as well as his peers, has the advantage of the feeling of accomplishment and consequent valued self-esteem that goes with succeeding in first grade. Anyone who has ever observed the damage done to the ego of the non-learning child from the outset of his failure could hardly question the possibility of such a hypothesis.

One interesting facet of the studies concerns the personality of the early readers. The characteristics most often observed tended to include some present in many disabled readers and leads to speculation as to the possibility of physical or emotional factors as the cause of reading disability. These children were described most often as being persistent, perfectionistic, sensitive, serious and good natured.

Also of great interest to any concerned with the content of kindergarten curriculums were the kinds of help most readily given to these children in their accumulation of reading capacity. As might be expected, a universal factor with these children was that they had all been read to from an early age. Among the other items most frequently mentioned as being the kind of help given were, "talked about the sounds of the letters," provided with "alphabet books or picture dictionaries or both," "helped subject with printing," "made letters copied from alphabet books," "scribblers," (every single family in one of the studies had provided the child with a blackboard). In over half the cases reported in both studies, "interest in learning to print developed prior to, or simultaneous with, an interest in learning to read. In fact, for some early readers, ability to read seemed almost like a byproduct of ability to print and to spell. For these 'pencil and paper kids,' the learning sequence

moved from (a) scribbling and drawing, to (b) copying objects and letters of the alphabet, to (c) questions about spelling, to (d) ability to read."

Another surprising aspect of the report was the absence of any close relationship between socioeconomic class and early reading ability but rather indications that parental willingness to provide consistent answers was a key factor.

Children Who Read Early will be valuable reading for the teacher who was educated during the long period when many of the theories this book questions were in vogue. Teachers, being human, tend to perpetuate ideas and learning theories they received during their formal education, but this interest in the eternal values and ideals of undergraduate days should be balanced with constant interest in changing educational understandings.

Frank Jennings, writing in the *Saturday Review*, sums up what ought to be a kind of educator's creed when he writes, "The public schools must become places where both children and teachers find learning useful and attractive; where intellectual, social, and moral courage are cherished; where no administrator is a buck passer; and where no educator, whatever his station, pleads that bee cannot be expected to cure what society has sickened. Our schools must be our primary sources of social health. We must begin by encouraging them to become centers of inquiry, where teachers are proud of their name."

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12. Some Thoughts on Language Intonation, by Barnett Russell, M.D.

Dear Ivor:

Your letter of Nov. 5th gives a good discussion of 'intonation' in spoken language. I agree with most of your remarks and would prefer a more analytical description of the child's special 'learning ability,' tho I am not concerned with children learning Suma, as Suma must begin as an adult language.

I believe that a foreigner speaking English is often difficult to understand because of 'sentence intonation' rather than in variation from normal phonemic values. Both factors, as well as perhaps a misstressed word, reduce intelligibility.

In spoken Suma, if used in its non-colloquial form, there should be a minimum of ambiguity as a result of sentence intonation. For example, a question with do need not rely on intonation: *tio mi timi?*, because *tio* clearly indicates a question, just as does *why*. If there are differing intonations for questions among different languages, then Suma has at present *no standard* rule for sentence intonation. Once Suma is widely known, then special study will be required to establish some kind of standard intonation. At present I would simply recommend the use of one's own intonation for speaking Suma.

Suma was well aware of the functional advantages of syllables over the alphabet and I was aware of the project 'Sol-resol' as well as the Japanese syllabic alphabet. 'Sol-re-sol' was deficient because it had only 7 syllables to work with. The Jap. alphabet was adequate because it used nearly all the syllabic possibilities of the alphabet. Suma did the same.

I agree that the written language is in many respects an inadequate expression of the spoken language in all cases.

I was not aware that the g-sound varied in 'ga, ge, gi' but this does not affect Suma. In Suma it was important to know from reports of studies on telephony that g & k, t & d, b & v, etc. are difficult to separate (acoustically). Even *drei* & *zwei* (in German) are in oral use quite clear, but quite often unclear on the telephone so that all Germans use the specially coined word *zwo* (tsvoh) in telephonic communication, to avoid confusion with *drei*.

A voice reading machine can be sensitized to be even more perceptive than the human ear, so that it might even be able to clearly distinguish a *b* from *v* in cases where the human ear fails. A voice reading machine could be taught to read sentence intonation, recognize phrases and varying lengths of pauses and relate these pauses and varying lengths of pauses to preceding and following intonation and even distinguish between a hesitation while looking for a word from a pause between the fluent phrases of an uninterrupted sentence.

Children learn languages by ear first. This does not mean this is the best way. Children have no choice. Adults do. Children analogize and make such mistakes as: I 'eated' for 'ate,' 'drinked' for 'drank,' etc. This occurs in all languages with irregularities. That is why the constructed languages are generally easier to learn. Suma would be easier than a normal language for voice reading by a machine.

A lecturer on English on T-V recently discussed *English* intonation in sentence usage and noted that he could even pronounce a sentence backwards including word and sentence stress and intonation and then play the tape backwards to get an intelligible normal (near normal) sounding sentence.

By the way, there have been about 20 requests for my pamphlet 'Hundred words in Suma in Fairy Tales' by high-school and college libraries. I wonder why they are interested? I have only one experimental person to draw conclusions from, but a scientist (as I consider myself) knows that a single experiment is not adequate basis for obtaining *facts*. The phrase: *baba temo* (one day) occurs several times and often at the beginning of the story or of a paragraph. I noted that this person learned this phrase spontaneously with a minimum of effort, yet each word by itself was met with a blank stare until I would repeat the word in its 'phrase' form that was familiar. This then was a case of 'phrasal learning' rather than of two words (word learning). Hence my basic conclusion agrees with the well accepted maxim, 'we all learn by *repetition*.' Language learning requires constant *repetition*, and an a priori type language requires lots of repetition. You may be able to read Interlingua at sight but only if *your* linguistic background is *Romanic*. A Japanese, Russian, Arab, etc. will not be able to read Interlingua at sight. By restriction of vocabulary to about 1000 words and by pairing many words and using simple compounds, the learning of Suma vocabulary is relatively easy for all nations. Meli (goodbye), *Bart Russell*

Barnett Russell, M.D., Plainview, N.Y.

13. The Alphabet Issue

Hare word and generalities often confuse and at times are intended 19 Man wide, and generalities often confuse and at times are intended to decieve and impress, so lettle specific Most of us do not have an IO deser Ond and the so lettle specific Most of us do not have an account concept of the singlet issue Mr. Tune wants consistency and actions formed by the object found most made and most and account of the property of the singlet issue Mr. Tune wants consistency and consumer the property of the singlet of these I would not attitude the order of the property of the second most of the property of the property of the second most of the property of the consistency and the consistency and the consistency of t The Alphabet Issue

C=ch The Issue. The ego. 20 Do we wish for the world to see, do we wish far he wild to se, That phonetic folk are wiser than we? That fonctibe folk are wiser than we? Are three hundred words good enough score, AL hre hundred wide quid enuf shor, When children can learn five times more? huencularn bon irn firetimes more? We set the goals through our alphabet
We set the gold through our alphabet
For little or more or all they can get,
for little or more areal the toom get,
too search your hearts for the answer best,
so search your hearts for the answer best,
To stand, advance or surpass the rest? (DeMar.)
To stand, advance or surpass the rest? 250 letters in original. 198 letrz in mi sistum. ~* * * * * 52.Original wastes 26%. Straight Line. One Sound=one Sign. strat lin . wwn soond=wwn sin . There is no valid reason to corrupt a system good.

There is no valid reason to corrupt a system good.

We feel that future people would protest it if they could.

We feel that future people would protest it if they could.

We feel that future people would protest it if they could.

Each time we compromise it with something that's unfit,

We multiply their troubles to save our selfish bit.

What hurt's it if we lator to make some needed type,

What hurt's it if we lator to make some needed type,

What if it be some larder old reading on the right?

What if it be some larder old reading on the shelves,

hurl of the some larder old reading on the shelves,

hurl of the some larder old reading on the shelves,

hur for the some transition troubles to bequeath a system good,

let's absorb transition troubles to bequeath a system good,

let's obsarb transition troubles to bequeath a system good,

let's obsarb transition troubles to bequeath a system good,

That their reg'lar reading, writing will be easy like it should. (De)

That their reg'lar reading, writing will be easy like it should.

439 letters in original.

361 letters in original. 1 letrz in mi sistum. This is the creed we carry 'round: Each sign reflect it's only sound. 78.0riginal wastes 21%. No matter then what some may say; All other plans will lead astray. (De) 106 letters in original. his is the bred we bore rooms 87 letrz in mi sustum. ec sin reflect it's onle soond. no motor tren hust sum ma sa; al uter planz we led ustra.

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