# THE VOCABULARY BURDEN OF OUR BUSINESS LIFE

BY LLOYD L. JONES

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T. A. C.

TABLE OF CONTENTS


| Chapter | | Page |
|---|---|---|
| I | Introduction . . . . . | 1 |
| | Purpose of Study . . . . . | 2 |
| | Procedure and Materials . . . . . | 3 |
| | Assumptions and Limitations of the Study | 6 |
| | Related Studies. . . . . | 7 |
| II | Determination of Vocabulary Level. . . . | 12 |
| III | Investigation of Our Business Life . . . | 25 |
| IV | Summary, Conclusions and Recommendations | 34 |
| | Bibliography | 37 |
| | Appendix | |

# LIST OF TABLES


| | | Page |
|---|---|---|
| I | Communities Represented . . . . . | 4 |
| II | Number of Different Words Missed in Each Thousand Level of the Thorndike Scale by the Students Taking Tests I and II, the Total Words Missed in Each Thousand Level and the Ratio of Times Missed to Words Missed, Analyzing All Material Read in the Twenty-Minute Period . . . . . | 14 |
| III | Number Different Words in Each Thousand Level Found in Test I, Ratio of Different Words Missed to Total Words Missed, and the Per Cent of Different Words Missed to Possible Different Words Missed, and Per Cent of Total Words Missed to Total Possible Words Missed . . . . . | 18 |
| IV | Number Different Words in Each Thousand Level Found in Test II, Ratio of Different Words Missed to Total Words Missed, and the Per Cent of Different Words Missed to Possible Different Words Missed, and Per Cent of Total Words Missed to Total Possible Words Missed . . . . . | 19 |
| V | Per Cent of Different Difficult Words Missed in Each Thousand Level to the Possible Different Words Missed in Each Thousand Level of the Thorndike List and the Per Cent of Total Words Missed to the Total Possible Words Missed in Tests I and II . . . . . | 22 |
| VI | Ratio of times Missed to Words Missed by the Students Taking Tests I and II, Analyzing a Uniform Number of Pages and the Entire Amount Read by Each Student . . | 23 |
| VII | Number and Frequency of Different Difficult Words Found in *Our Business Life* by Lloyd L. Jones . . . . | 25 |
| VIII | The Number of Different Difficult Words Found in *Our Business Life* That Occur Once, Twice, Three, Four, Five, Six, Seven, and More Than Seven Times . . | 30 |

# LIST OF GRAPHS

Page

I Ratios of Times Missed to Words Missed in Test I, For a Uniform Number of Pages and For the Entire Material Read . . . . .15

II Ratios of Times Missed to Words Missed in Test II, for a Uniform Number of Pages and For the Entire Material Read . . . . .16

III Per Cent of Total Words Missed in Each Thousand Level to Possible Words Missed in Each Level in Tests I and II, Uniform Number of Pages . . . . . .20

Per Cent of Total Words Missed in Each Thousand Level to Total Possible Words Missed in Each Level in Tests I and II, Uniform Number of Pages . . . . . 20

# CHAPTER I

## INTRODUCTION

Present evidence indicates that many of the subjects in the curricula of the grades and secondary schools, as presented in the average textbooks used in these subjects are too difficult for the students.[1] The inference is that many authors of texts do not give enough attention to the relative difficulty of the vocabularies they include in these texts.

The reading difficulty in an introductory subject is a particularly important matter to consider. Everyday business training, or as it is sometimes called, junior business training, general business training, introduction to business, is the introductory course in business on the high school level.

Everyday business training in general is offered on the ninth grade level, although in some cases this course has been offered in all secondary school grades including the eighth. It is being offered principally to ninth grade students of all types, abilities, interests and backgrounds, and since textbooks have been considered one of the most important aids in teaching it is well to consider the vocabulary burden of one of the textbooks to see if students have difficulty in comprehending it.

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[1] A. L. Gates, Interest and Ability in Reading, The Macmillan Company, New York., 1930, Chapter I.

> By vocabulary burden is meant the proportion of new or different words in a text or supplementary reading material. In a sentence of ten different words each of which is necessary to meaning, how many words are familiar to the reader? If he does not know any of them, he must learn ten words in as many words of text, a vocabulary burden or density of 10:10. If he knows all but four words, the density is 4:10 or 2:5.[2]

This study is an attempt to determine if there is a definite level at which ninth grade students have difficulty in comprehending everyday business training textbooks; if so, what the level is; and to analyse Our Business Life by Lloyd L. Jones to determine if it is too difficult for the students for whom it is intended by analysing the number of difficult words found in the book, their frequency of occurrence, and any attempts to help the students master the words, such as definition, illustration and repetition. This study deals in general with the problem of vocabulary burden to aid authors in writing everyday business training books and to furnish some criteria for judging the difficulty of textbooks already written in the field.

## PURPOSE OF THE STUDY

This study seeks:

1. To determine at what level, if any, ninth grade students have difficulty in comprehending everyday business training textbooks.
2. To analyse Our Business Life to determine:
   a. The number of words found in the book which ninth grade students have difficulty in understanding.
   b. The placement of these words in the Thorndike scale.
   c. The frequency of occurrence of these words.
   d. The total number of difficult words in each thousand level, according to the Thorndike placement.

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[2] Eugene Jones Roseboro, An Analysis of the Vocabulary Burden of Twelve Elementary French Reading Textbooks, Ohio State University, 1937, Master's Thesis, p. 1

e. The number of difficult words not found in the Thorndike list.

f. The percentage of different difficult words in each thousand level, according to the Thorndike placement scale.

g. The number of different difficult words used once, twice, three, four, five, six, seven, and more then seven times by the author.

h. The number, rating and frequency of occurrence of difficult words defined or explained by the author.

## PROCEDURE AND MATERIALS

The procedure used in this study is a somewhat standardized procedure developed in other vocabulary studies. In general, the vocabulary level is determined by the use of control tests. The results of these tests are used in the analysis of the textbook.

By permission of the publishers, portions of General Business, Third Edition, by Ernest H. Crabbe and Clay D. Slinker (South-Western Publishing Company, 1936) and Introduction to Business, Third Edition, by John G. Kirk, Harold B. Buckley and Mary A. Waesche (The John C. Winston Company, 1933) were mimeographed and used as tests to determine the pupil comprehension of word meanings. An attempt was made to secure material from these books which was typical of the vocabularies used in the books. It is assumed that the use of two different textbooks would make it possible to check the validity of this method of testing the vocabulary comprehension of students in reading everyday business training textbooks.

This material--which was unfamiliar to all of the students--was administered to 301 ninth grade pupils in seven communities of varying sizes in the State of Oklahoma as shown in Table I.

Table I

| Community | No. Test I Received | No. Test II Received | No. Test III Received |
|---|---|---|---|
| Cherokee | 26 | 26 | |
| Claremore | 106 | 69 | |
| Collinsville | 57 | 57 | 57 |
| Eureka | 20 | 20 | 20 |
| Okmulgee | 24 | 24 | |
| Red Rock | 22 | 22 | 22 |
| Ripley | 46 | 46 | 46 |
| | 301 | 264 | 145 |

The material from General Business is hereafter referred to as Test I, the material from Introduction to Business is referred to as Test II, and the material from General Business which was used in Test I was repeated with a little different procedure and is hereafter referred to as Test III.

The pupils were asked to read Test I and to underline all of the unfamiliar words which they read during a twenty-minute period. At a later date the same procedure was repeated with Test II. The two tests were used for a double purpose: first, to check the validity of the method of using material from two different sources; and second, to

check the reliability of the materials used. A timed procedure was used in order that the testing situation would be as nearly comparable to the reading of the textbooks as possible. Test III consisted of identical material used in Test I, but the students were asked to underline all of the familiar words which they read during a twenty-minute period. It was hoped that this might give a check on the reliability of the answers. Copies of the tests may be found in the Appendix.

Each different word a student underlined was tabulated on a card and the Thorndike rating of the word was noted. This tabulation compilation was made by the use of the International Business Machines sorting and tabulating machine.

Alphabetical lists of all the words missed in each test and the word levels for each test separately were made and compared. Graphical analyses were made to aid in determining whether or not a definite difficulty level existed and if so, at what point it is in the Thorndike scale. The first lists made included words missed by all the students during the twenty-minute periods regardless of the number of pages read. Following that a uniform number of pages was analyzed in the same way, again taking each test separately. The paper having the least number of pages read served as a basis for the number of pages to be checked this time.

The test material of each test was analyzed to see how many different words there were on each thousand level. Then ratios of times missed to words missed on each test were calculated. This is found in Table II. The per cent of different words missed to possible different words missed was also calculated--and the per cent of total words missed by all students to the total possible words missed by all students. These data were used to determine the level at which there was a marked increase of words missed.

After the level of difficulty was determined the textbook was analyzed to determine the number of words above the established level and their frequency of occurrence. Further analysis was made to determine the number of these words which were defined; thus, the vocabulary burden of the textbook is assumed to be the difference between the words above the established reading level less the words defined.

## ASSUMPTIONS AND LIMITATIONS OF THE STUDY

The analyses of the preliminary tests and the textbook are based on Thorndike's A Teacher's Word Book of 20,000 Words (1932) and are limited by its imperfections. Mr. Thorndike recognizes such deficiencies as the failure to distinguish between homographs like bear (the animal) and bear ( to carry), giving proper names lower ratings than they should have, and giving too low ratings to abbreviations and to words recently introduced into books and magazines. Another imperfection is that this rating is based on all kinds of literature and is primarily for adult use. No indication is made as to whether a word ranks 999 or 901. New words brought into the vocabulary of almost every ninth grade student by new inventions, the depression and war have been omitted.

This study is limited further by the adequacy of the underlining method. Although this method has been proven to be more adequate than other methods, it is not perfect. It is likely that all the words the students underlined were unfamiliar, but the students probably did not underline all of the unfamiliar words.

Another assumption is in securing tests which are valid. It was decided to use portions of other everyday business training texts since this material is in the sequence in which the student would ordinarily encounter it.

## RELATED STUDIES

As far as can be determined there have been no vocabulary studies made in the field of everyday business training. However, numerous studies have been made in other fields. Foremost among these are the studies made under the supervision of Dr. Francis D. Curtis of the University of Michigan in the field of science. These studies have been made over a period of some nine years and represent the results of more than a hundred investigations. This study follows in part the procedure used in these investigations.

### Types of Vocabulary Investigations

Most of the investigators have used sampling techniques.

> Patty and Painter[3] tabulated alphabetically, along with the frequencies of appearance, all the words in the third full line of each fifth page, with few exceptions, and these exceptions only where they seemed necessary and desirable. The investigators compared their resulting list with the earlier one of Thorndike and recorded the Thorndike index number for each word. Then they obtained the weighted value of each word by multiplying its frequency by its index number, and transformed this product into the average-word-weighted-value, or arithmetical mean, of the Thorndike index numbers by dividing the total weighted values for all words of a sample by the total number of words in the sample. They last computed the index number representing each book by dividing the average-word-weighted-value by the range of words within the sample. This index gave the ratio of the different words to the difficulty of the average word. Thus the greater the range, the smaller was the index number, and hence the greater was the vocabulary burden of the book.[4]

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3 W. W. Patty and W. J. Painter, "A Technique of Measuring the Vocabulary Burdens of Textbooks," Journal of Educational Research, Vol. XXIV (June and September, 1931), pp. 23-32 and 127-134, as quoted in Francis D. Curtis, Investigations of Vocabulary in Textbooks of Science for Secondary Schools, 1938.

4 Francis D. Curtis, Investigations of Vocabulary in Textbooks of Science for Secondary Schools, Ginn and Company, Boston, 1938, p. 10-11.

Dr. Curtis concluded that

> any sampling technique is at best a makeshift and a substitute of more or less dubious merit, for the determination based on a complete word count. The employment of a sampling method can be justified only on the grounds of expediency and practicability, since it is usually not feasible to make a complete word-by-word analysis of any textbooks.[5]

> . . . . we must register an objection to the method which has been employed, of sampling textbooks to compare them with one another with respect to vocabulary burden. Aside from the usual possibility of error in sampling, there are large and unavoidable errors in such sampling. Textbooks are not and cannot be homogeneous. . . . no section of the book can fairly represent all sections. To overcome this difficulty the method of sampling selects lines of regular intervals throughout. This runs into even greater inaccuracy. The sample is then not a piece of reading matter at all, but a succession of disconnected bits. It fails to represent the text, because it cannot possibly show the factor of repetition of words. No matter how careful an author was to repeat his statements, it would make no difference in such a sampling, because a single line on a page does not show what precedes or follows it, and another line, five pages on, or even on the next page, will almost certainly contain different material. Occasional whole pages might form a better sample, but still not a representative one, and for the same reason. In fact, the conditions of language and style in writing are such that no study of pieces can truly represent the whole.[6]

A study was made by Ward analyzing first a sample of one thousand words from each of two textbooks of American History, and next, all the words found in the first one hundred pages of each of these same texts. His opinion was:

> In view of the wide discrepancy between a range of 121 different words per 1000 by actual count, and 533 different words per 1000 obtained by a sampling of 10 words (that is, the words in one line) from every tenth page the opinion that the reliability of these thousand-word samplings might be called 'fair' is wide of the mark. . . . The sampling of words from a book is not analogous

---

5 Francis D. Curtis, op. cit., p. 12.

6 E. D. Dolch, "Vocabulary Burden," Journal of Educational Research, Vol. XVII, (March, 1928), pp. 170-183, as quoted from Francis D. Curtis, op. cit.

> to a situation where sampling may be resorted to as a means of reducing reasonable doubt to its minimum, nor can we be hopeful that reliability of the sampling method applied to vocabularies can be increased by taking further thousand-word samplings, to a degree that would justify conclusions of value.[7]

One of the foremost problems encountered in this study was that of finding a method of determining pupil comprehension of the meanings of words that would be valid, reliable and convenient.

In surveying the literature available it was found that the short-answer test forms had been used as a method by Sims,[8] Dolch,[9] and Symonds.[10] Other methods employed include multiple response, matching, and completion.

> Not any of these studies or other related ones, however, contributed techniques which seemed likely to be effective in the solution of all phases of the problem under investigation. The more reliable and valid means of testing vocabulary comprehension which such studies evaluated,--namely, the multiple-response, the matching, the completion, and various forms of identification tests,--though of unquestioned value in determining comprehension of words listed or otherwise selected for testing, were deemed of little or no value as a means of determining the pupils' understanding of the vocabulary of an extensive sampling of prose content such as the day-to-day reading assignments in textbooks. Therefore it was decided to investigate the underlining technique for the purpose of determining whether it was sufficiently valid and reliable to justify its use. This technique . . . . consisted merely of requiring the pupil, as he read a given context, to draw a line under every word in it the meaning of which he thought he did not know well enough so that he would be able to define it, to use it correctly, to give a

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7 Jesse L. Ward, "Measuring Vocabulary Burden," American School Board Journal, Vol. LXXI (September, 1925) p. 98, as quoted from Francis D. Curtis, op. cit.

8 V. M. Sims, "Reliability and Validity of Four Types of Vocabulary Tests," Journal of Educational Research, Vol. XX (September, 1929) pp. 91-96, as quoted from Francis D. Curtis, op. cit.

9 E. W. Dolch, Reading and Word Meaning. Ginn and Company, Boston, 1915, as quoted from Curtis, op. cit.

10 P. M. Symonds, "Size of Recognition and Recall Vocabularies," School and Society, Vol. XXIV (October 30, 1926) pp. 559-560, as quoted from Curtis, op. cit.

> synonym, or to explain its use or meaning in other terms. This technique . . . . was selected for investigation because, in spite of its probable limitations and defects, it was judged to be the only one which could be used to determine a pupil's comprehension of the vocabulary encountered by him in long program selections for which other vocabulary tests were unavailable.[11]

Investigations were then made to determine the validity of the underlining test; in other words, to see if the students actually underscored the words they did not know. Dr. Curtis decided to use two plans for this:

> Plan I. To compare the results secured by having pupils underline words the meanings of which they think they do not know with those secured by having the same pupils underline, in the same selection, the words the meanings of which they think they do know.
>
> Plan II. To compare word comprehension as indicated by the results of the underlining test with that indicated by the results of multiple-response, matching, synonym, and conference tests . . . .[12]

Dr. Curtis concludes:

> These comparisons indicate that the validity of the underlining test varies with the degree of difficulty of the vocabulary tested; that is, that in general the validity is high if the vocabulary is difficult, but the validity is lower if the vocabulary is easy.[13]

Tests on the reliability of the underlining test of vocabulary comprehension show that the reliability is high.[14]

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11 Curtis, op. cit., pp. 22-23.

12 Curtis, op. cit., p. 25, 26.

13 Curtis, op. cit., p. 33.

14 Ibid., p. 34, 35.

Dr. Curtis summarizes the data on the underlining method as a possible method for this type of study:

> From the evidence here presented the following conclusions seem justified:
>
> 1. The method of determining vocabulary comprehension by having pupils underline the words in context which they think they do not comprehend is a convenient means of determining words which the pupils do not comprehend. Of the tests investigated it is the only one which is practicable for use in determining pupil comprehension of the vocabulary in extensive selections of context, since its use requires no previous analysis of the selections or previous preparation of vocabulary test forms or items by the investigator.
>
> 2. The underlining test possesses a high degree of reliability and validity.
>
> 3. The underlining test is not effective as a means of determining all the words in a given context which the pupil does not comprehend. The evidence seems conclusive, however, that such words as a pupil does underline in context as unknown to him are very likely to be outside his vocabulary range.[15]

This it appears that the underlining method is the most effective means of determining pupil comprehension of word meanings.

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[15] Curtis, op. cit., p. 36.

# CHAPTER II

## DETERMINATION OF VOCABULARY LEVEL

As previously stated, one of the purposes of this study is to determine the vocabulary level of economic terms of ninth grade students. The results of more than a hundred such studies in the field of science consistently brought out the fact that pupils have difficulty in comprehending the vocabulary of current science textbooks at the six or seven thousand level of the Thorndike word list. Although the method used in determining this level in science might well be used in everyday business training, it could not be assumed that the difficulty level of science would be the same as everyday business training. Students have been exposed to scientific phenomena and study all their lives, while their economic knowledge has been limited principally to arithmetic and buying. It is therefore reasonable to expect that the vocabulary level of economic terms may not be as high as that of some other type.

Ninth grade pupils in varying sized communities were asked to read excerpts from everyday business training textbooks for three twenty-minute periods. For the first twenty-minute period the students read materials selected from General Business, Third Edition, by Ernest H. Crabbe and Clay D. Slinker (South-Western Publishing Company, Cincinnati, Ohio, 1936), underlining the unfamiliar words. The second test was taken from Introduction to Business, Third Edition, by John G. Kirk, Harold B. Buckley and Mary A. Waesche (The John C. Winston Company, Philadelphia, Pennsylvania, 1933) The third test was a repetition of the first test, except that the students were asked to underline the words the meanings of which they did know. It was hoped by using portions of two textbooks

to check on the validity of the testing materials. The third test was to be a check on the reliability of the answers. However, third tests were not obtained from a sufficiently large number of the schools and the data furnished by those which were returned were not in sufficiently satisfactory form to warrant any conclusions about the reliability of the answers. The data concerning Test III, therefore, are not presented in the study.

The test material, it was assumed, was unfamiliar to the students who were asked to read at their own rates of speed, underlining the words the meanings of which they did not know or thought they did not know. Students were informed that this did not affect their grades in any way. At the end of twenty minutes, time was called, and the students were asked to write their names on the papers and to check the line they had just finished reading.

The results of these tests are found in the accompanying tables and graphs. The actual words missed, their placement and frequency may be found in the Appendix.

Table II is an analysis of Tests I and II, presenting the number of different words in the tests, according to the Thorndike rating, the number of these different words missed by the 301 students and the ratio of times missed to words missed. It can be seen in Test I that this ratio increases rather regularly and reaches 14.9 at the 7,000 level, then drops to 12.2. In Test II, the rise is rather gradual to the 8,000 level when it reaches 10.8 and then drops to 5.4.

In comparing the data for Test I and Test II, it can be seen that the number of words found in each test in the different thousand levels is comparatively the same. The total words missed in each test are

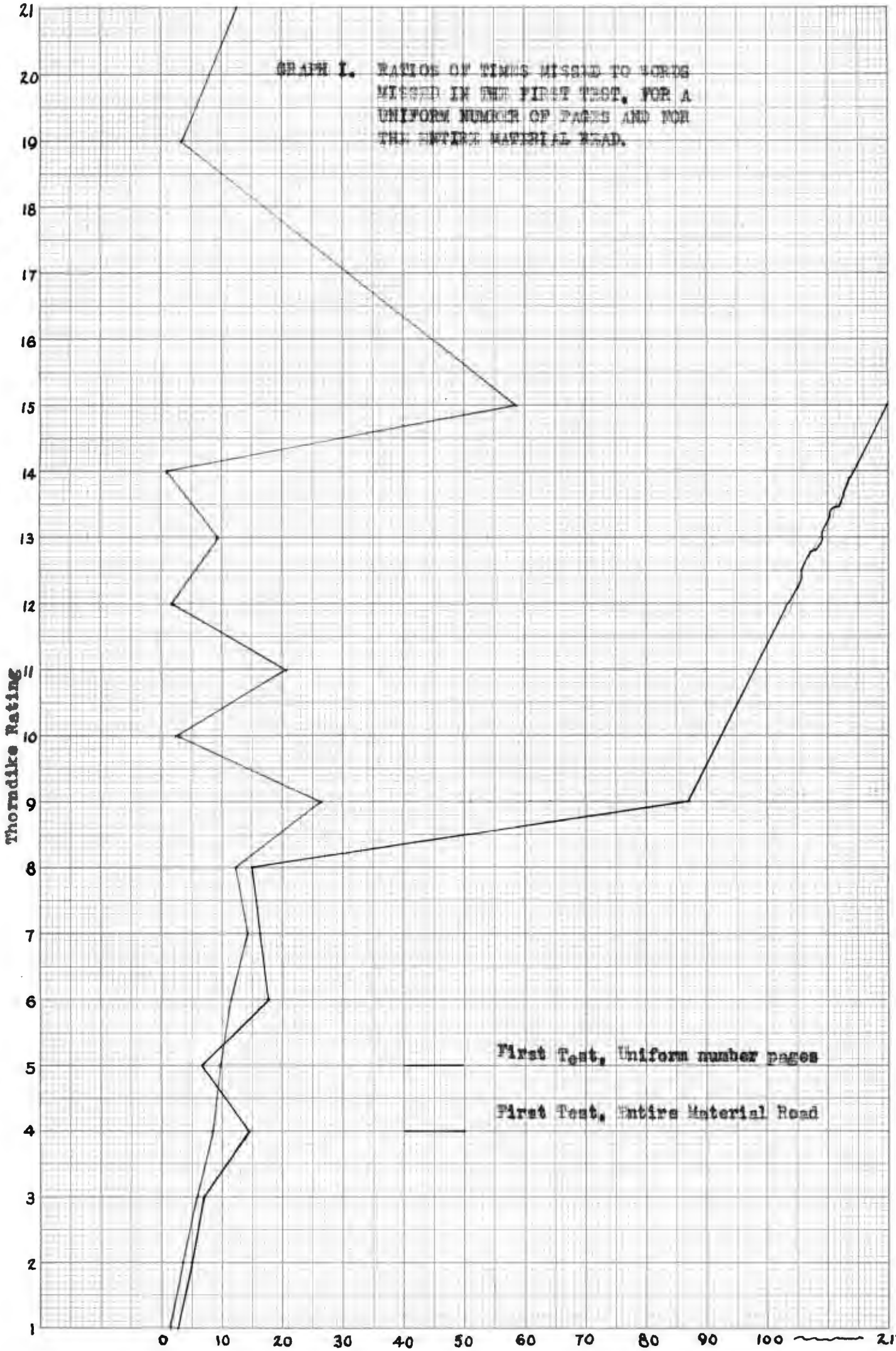
TABLE II

NUMBER OF DIFFERENT WORDS MISSED IN EACH THOUSAND LEVEL OF THE THORNDIKE SCALE BY THE STUDENTS TAKING TESTS I AND II, THE TOTAL WORDS MISSED IN EACH THOUSAND LEVEL AND THE RATIO OF TIMES MISSED TO WORDS MISSED, ANALYZING ALL MATERIAL READ IN THE TWENTY-MINUTE PERIOD

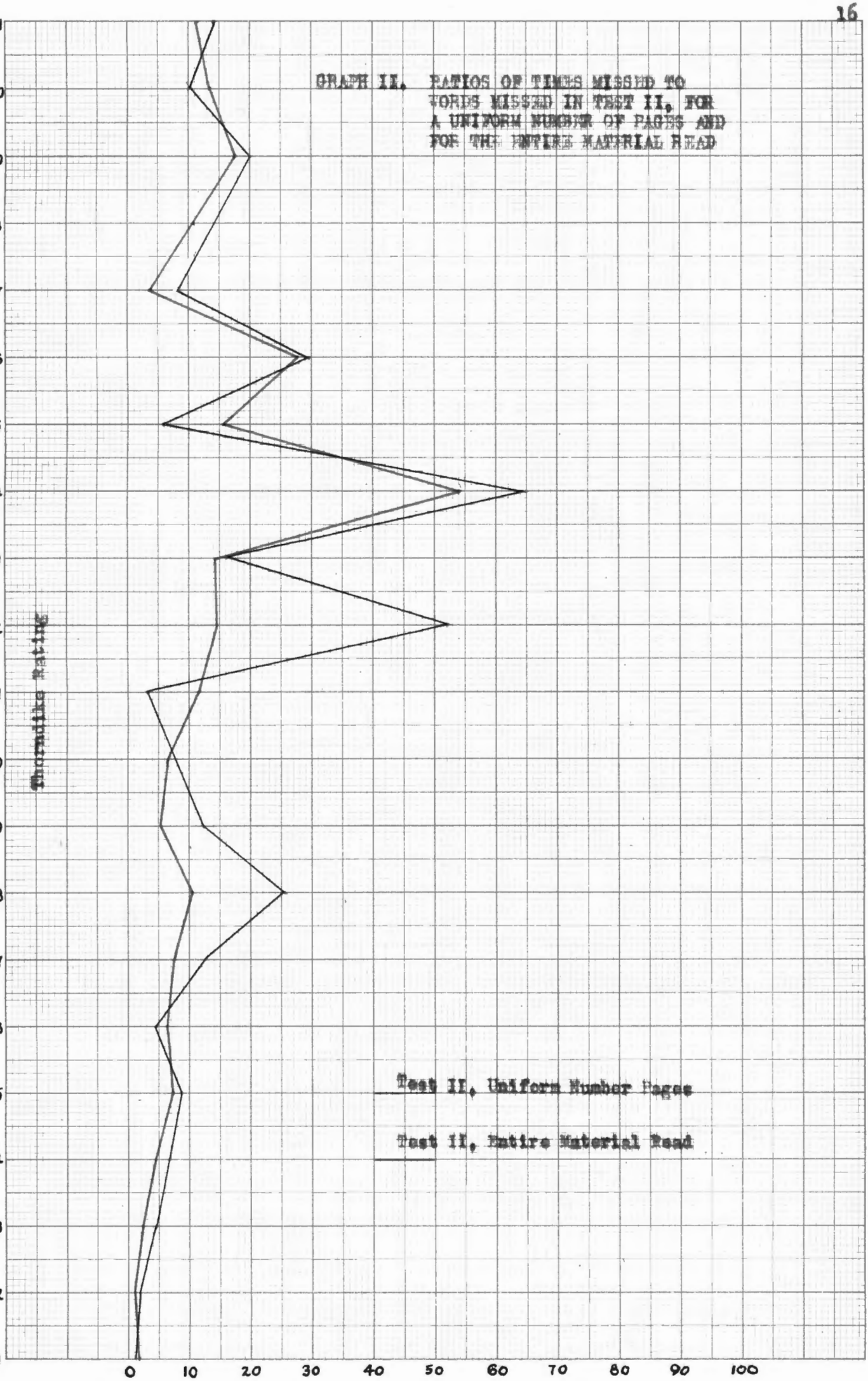
| Thorndike Rating | Test I | | | Test II | | |
|---|---|---|---|---|---|---|
| | No. Dif. Words Missed | Total Words Missed | Ratio Times Missed to Words Missed | No. Dif. Words Missed | Total Words Missed | Ratio Times Missed to Words Missed |
| 1,000 | 17 | 23 | 1.4 | 15 | 17 | 1.1 |
| 2,000 | 45 | 150 | 3.3 | 34 | 52 | 1.5 |
| 3,000 | 43 | 258 | 6.0 | 41 | 92 | 2.2 |
| 4,000 | 36 | 319 | 8.9 | 23 | 102 | 4.4 |
| 5,000 | 33 | 313 | 9.5 | 26 | 196 | 7.5 |
| 6,000 | 12 | 139 | 11.6 | 22 | 137 | 6.2 |
| 7,000 | 18 | 268 | 14.9 | 27 | 211 | 7.8 |
| 8,000 | 19 | 232 | 12.2 | 25 | 271 | 10.8 |
| 9,000 | 13 | 350 | 26.9 | 12 | 65 | 5.4 |
| 10,000 | 8 | 19 | 2.4 | 12 | 73 | 6.1 |
| 11,000 | 3 | 62 | 20.7 | 5 | 58 | 11.6 |
| 12,000 | 5 | 10 | 2.0 | 4 | 59 | 14.8 |
| 13,000 | 3 | 28 | 9.3 | 3 | 43 | 14.3 |
| 14,000 | 2 | 2 | 1.0 | 4 | 216 | 54.0 |
| 15,000 | 4 | 234 | 58.5 | 5 | 79 | 15.8 |
| 16,000 | | | | 5 | 136 | 27.2 |
| 17,000 | | | | 2 | 7 | 3.5 |
| 18,000 | | | | 4 | 43 | 10.8 |
| 19,000 | 2 | 7 | 3.5 | 3 | 52 | 17.3 |
| 20,000 | | | | 6 | 80 | 13.3 |
| Over 20,000 | 9 | 115 | 12.8 | 9 | 102 | 11.3 |
| TOTALS | 272 | 2529 | | 287 | 2091 | |

Table II reads: In Test I, 17 different words found in the 1,000 level were missed a total of 23 times by the students taking the test. The ratio of times missed to words missed, obtained by dividing 17 into 23, is 1.4. In Test II, 15 words in the 1,000 level were missed a total of 17 times or a ratio of 1.1.

GRAPH I. RATIOS OF TIMES MISSED TO WORDS MISSED IN THE FIRST TEST, FOR A UNIFORM NUMBER OF PAGES AND FOR THE ENTIRE MATERIAL READ.



GRAPH II. RATIOS OF TIMES MISSED TO WORDS MISSED IN TEST II, FOR A UNIFORM NUMBER OF PAGES AND FOR THE ENTIRE MATERIAL READ



approximately equal and the ratios of times missed to words missed in each test show a consistent rise to the seven and eight thousand levels.

The graphs accompanying this table indicate these same trends in a more forceful way. The graph presenting the results of Test I shows a gradual increase to the seven and eight thousand levels. The breaks seem to be at approximately the same places. The graph presenting the results of Test II likewise shows a gradual increase to the seven thousand level, then a decided jump. The data for a uniform number of pages and for the total amount read by each student indicate that the tests were valid.

Table III is an analysis of the uniform number of pages read by the 301 students in Test I, presenting the number of different words found in each thousand level in the test, the number of these words missed and the number of times missed, the ratio of times missed to different words missed and also the per cent of different words missed to possible different words missed and the per cent of total words missed to the total possible words missed. It should be noted that the ratio of times missed to words missed increases rather gradually, with a large increase at the 4,000 level, a drop at the 5,000 level, then another increase. The large per cent at the 9,000 level may be due to the small number of words found at that level in the test.

The per cent of different words missed to the possible words missed increases regularly to the 7,000 word level; then, there is a big jump. The same is true of the per cent of total words missed to the total possible words missed. At the 7,000 level the per cent is almost doubled. All this indicates that at the 7,000 level there is a definite rise in difficulty.

TABLE III

NUMBER DIFFERENT WORDS IN EACH THOUSAND LEVEL FOUND IN TEST I, ANALYZING UNIFORM NUMBER OF PAGES, THE NUMBER OF THESE WORDS MISSED BY THE STUDENTS, TOTAL WORDS MISSED ACCORDING TO THE THORNDIKE PLACEMENT, RATIO OF DIFFERENT WORDS MISSED TO TOTAL WORDS MISSED, THE PER CENT OF DIFFERENT WORDS MISSED TO THE POSSIBLE DIFFERENT WORDS MISSED, AND THE PER CENT OF TOTAL WORDS MISSED TO THE TOTAL POSSIBLE WORDS MISSED

| Thorndike Rating | No. Dif. Words in Test | No. Dif. Words Missed | Total Words Missed | Ratio Times Missed to Words Missed | Per Cent Dif. Words Missed to Possible Words Missed | Per Cent Total Words to Total Possible Words Missed |
|---|---|---|---|---|---|---|
| 1,000 | 1381 | 2 | 4 | 2.0 | 0.1 | 0.0 |
| 2,000 | 123 | 13 | 59 | 4.5 | 10.6 | 0.1 |
| 3,000 | 55 | 18 | 121 | 6.7 | 32.7 | 0.7 |
| 4,000 | 41 | 13 | 194 | 14.9 | 31.7 | 1.6 |
| 5,000 | 29 | 14 | 95 | 6.8 | 48.3 | 1.1 |
| 6,000 | 16 | 5 | 88 | 17.6 | 31.3 | 1.8 |
| 7,000 | 10 | 6 | 98 | 16.3 | 60.0 | 3.2 |
| 8,000 | 17 | 5 | 75 | 15.0 | 29.4 | 1.5 |
| 9,000 | 6 | 3 | 261 | 87.0 | 50.0 | 14.5 |
| 10,000 | 3 | | | | | |
| 11,000 | 1 | | | | | |
| 12,000 | 1 | | | | | |
| 13,000 | | | | | | |
| 14,000 | | | | | | |
| 15,000 | 1 | 1 | 217 | 217.0 | 100.0 | 72.9 |
| 16,000 | | | | | | |
| 17,000 | | | | | | |
| 18,000 | | | | | | |
| 19,000 | 1 | | | | | |
| 20,000 | | | | | | |
| Over 20,000 | | | | | | |
| TOTALS | 1685 | 80 | | | | |

Table III reads: In Test I, analyzing the same number of pages for each student, it was found that of the 1381 different words found in the text which occurred in the 1,000 level, 2 were missed a total of 4 times or a ratio of 2.0 times. The per cent of different words missed to possible different words missed, found by dividing 2 by 1381, is .1 per cent. The per cent of total words missed to the total possible words missed, is 0.0 per cent. This was found by dividing 4, the total words missed by (1381 x 301 students) the total possible words missed.

TABLE IV

NUMBER DIFFERENT WORDS IN EACH THOUSAND LEVEL FOUND IN TEST II, ANALYZING UNIFORM NUMBER OF PAGES, THE NUMBER OF THESE WORDS MISSED BY THE STUDENTS, TOTAL WORDS MISSED ACCORDING TO THE THORNDIKE PLACEMENT, RATIO OF DIFFERENT WORDS MISSED TO TOTAL WORDS MISSED, THE PER CENT OF DIFFERENT WORDS MISSED TO THE POSSIBLE DIFFERENT WORDS MISSED, AND THE PER CENT OF TOTAL WORDS MISSED TO THE TOTAL POSSIBLE WORDS MISSED

| Thorndike Rating | No. Dif. Words in Test | Number Different Words Missed | Total Words Missed | Ratio Times Missed to Words Missed | Per cent Different Words Missed to Possible Words Missed | Per Cent Total Words To Total Possible Words Missed |
|---|---|---|---|---|---|---|
| 1,000 | 359 | 3 | 3 | 1.0 | 0.8 | 0.0 |
| 2,000 | 123 | 15 | 28 | 1.9 | 12.2 | 0.1 |
| 3,000 | 65 | 17 | 82 | 4.8 | 26.2 | 0.3 |
| 4,000 | 25 | 8 | 55 | 6.9 | 30.8 | 0.8 |
| 5,000 | 29 | 24 | 124 | 5.2 | 82.3 | 1.2 |
| 6,000 | 24 | 10 | 42 | 4.2 | 41.7 | 0.7 |
| 7,000 | 17 | 12 | 155 | 12.8 | 70.6 | 3.3 |
| 8,000 | 18 | 6 | 150 | 25.0 | 33.3 | 3.3 |
| 9,000 | 7 | 4 | 51 | 12.8 | 57.1 | 2.8 |
| 10,000 | 5 | | | | | |
| 11,000 | 6 | 2 | 6 | 3.0 | 33.3 | 0.4 |
| 12,000 | 3 | 1 | 92 | 92.0 | 33.3 | 6.6 |
| 13,000 | 2 | 1 | 16 | 16.0 | 50.0 | 3.0 |
| 14,000 | 4 | 2 | 130 | 65.0 | 50.0 | 12.3 |
| 15,000 | 5 | 4 | 23 | 5.8 | 80.0 | 1.7 |
| 16,000 | 2 | 2 | 59 | 29.5 | 100.0 | 11.2 |
| 17,000 | 1 | 1 | 8 | 8.0 | 33.3 | 1.0 |
| 18,000 | 3 | | | | | |
| 19,000 | 5 | 2 | 50 | 20.0 | 40.0 | 3.0 |
| 20,000 | 6 | 3 | 29 | 9.7 | 50.0 | 2.0 |
| Over 20,000 | 10 | 2 | 28 | 14.0 | 20.0 | 1.2 |
| TOTALS | 722 | 120 | 1066 | | | |

Table IV reads: In Test II, analyzing the same number of pages for each student, it was found that of the 359 different words found in the text which occurred in the 1,000 level, 3 were missed a total of 3 times or a ratio of 1.0. The per cent of different words missed to possible different words missed, found by dividing 3 by 359, is .8 per cent. The per cent of total words missed to the total possible words missed is 0.0 per cent. This was found by dividing 3, the total words missed, by (359 x 264 students) the total possible words missed.

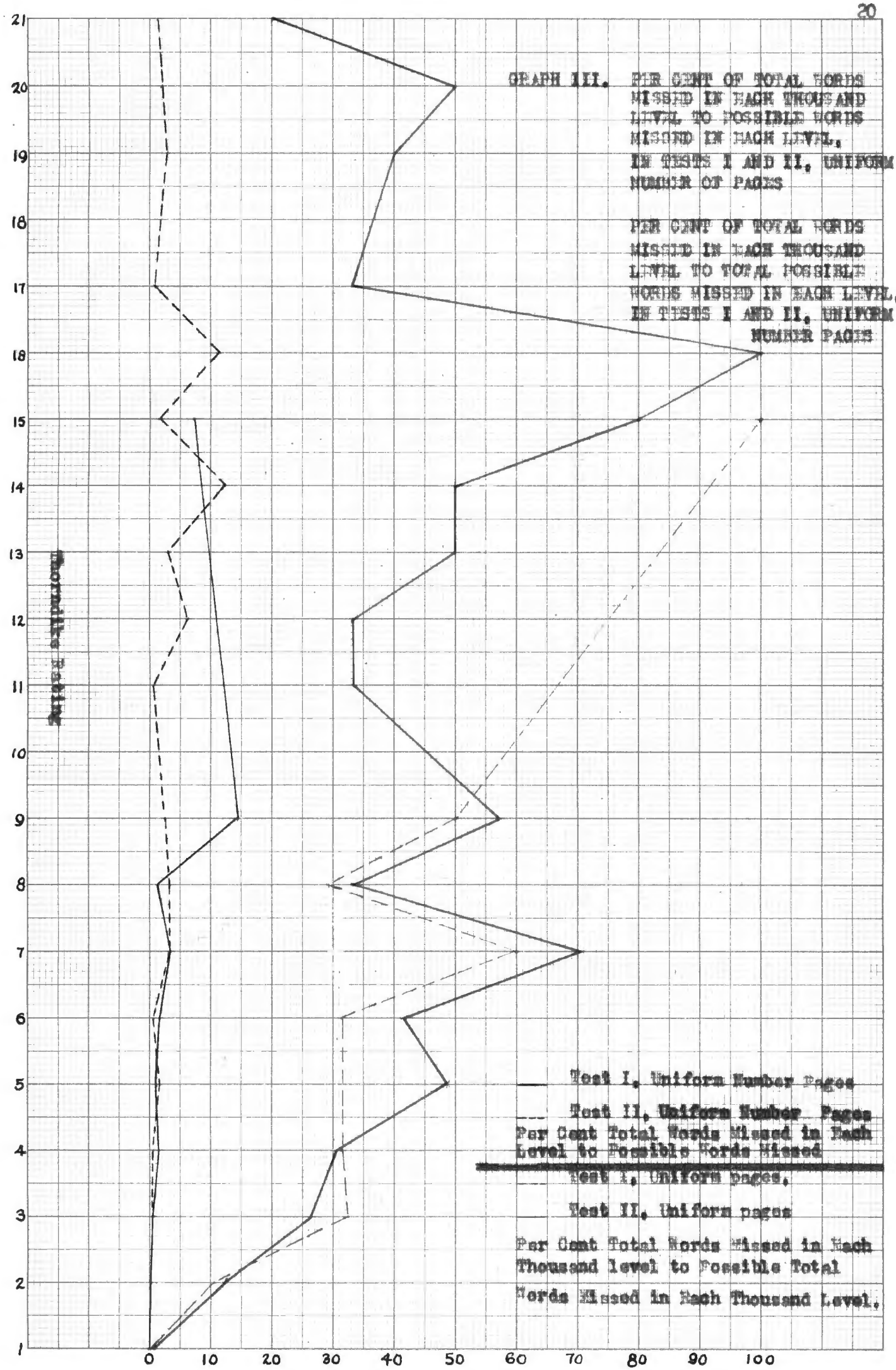

GRAPH III. PER CENT OF TOTAL WORDS MISSED IN EACH THOUSAND LEVEL TO POSSIBLE WORDS MISSED IN EACH LEVEL, IN TESTS I AND II, UNIFORM NUMBER OF PAGES
PER CENT OF TOTAL WORDS MISSED IN EACH THOUSAND LEVEL TO TOTAL POSSIBLE WORDS MISSED IN EACH LEVEL, IN TESTS I AND II, UNIFORM NUMBER PAGES
Thousand Level
21
20
19
18
17
18
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
10
20
30
40
50
60
70
80
90
100
Test I, Uniform Number Pages
Test II, Uniform Number Pages
Per Cent Total Words Missed in Each Level to Possible Words Missed
Test I, Uniform pages,
Test II, Uniform pages
Per Cent Total Words Missed in Each Thousand level to Possible Total Words Missed in Each Thousand Level.

Table IV is an analysis of the uniform number of pages of Test II, presenting the number of different words found in each thousand level in the test, the number of these missed and the number of times missed, the ratio of times missed to words missed, the per cent of total words missed to the total possible words missed, and the per cent of different words missed to possible different words missed. It should be noted that at the 7,000 level there is an abrupt increase in the ratio of times missed to words missed. The per cent of words missed to possible words missed also shows a much larger increase in the 7,000 area. The same is true of the per cent of total words missed to the total possible words missed.

In comparing Tables III and IV, it is noted that approximately the same number of different words in each thousand level are found in the two tests, up to the 11,000 level. The relatively few words found in each test above that level give little basis for comparison. In Table II, it is shown that more of the words in each thousand level are missed in the 2, 3, 4, and 5,000 levels, but the per cent of different words missed is largest at the 7,000 level. At that level, the words missed comprise sixty per cent of the total words in the test. At the 7,000 level in Table III, the per cent is 70.6. The per cents of total words missed to total possible words missed increase in about the same proportion in each test. At the seven thousand level in each test there is a decided jump.

The graph accompanying these two tables further emphasizes these findings, that at the seven thousand level in each test for the constant

TABLE V

THE PER CENT OF DIFFERENT DIFFICULT WORDS MISSED IN EACH THOUSAND LEVEL TO THE POSSIBLE DIFFERENT WORDS MISSED IN EACH THOUSAND LEVEL OF THE THORNDIKE LIST AND THE PER CENT OF TOTAL WORDS MISSED TO THE TOTAL POSSIBLE WORDS MISSED IN TESTS I AND II

| Thorndike Rating | Uniform Number of Pages Per Cent Different Words Missed to Possible Different Words Missed | | Uniform Number of Pages Per Cent Total Words Missed to Total Possible Words Missed | |
|---|---|---|---|---|
| | Test I | Test II | Test I | Test II |
| 1,000 | .1 | .8 | .0 | .0 |
| 2,000 | 10.6 | 12.2 | .1 | .1 |
| 3,000 | 32.7 | 26.2 | .7 | .5 |
| 4,000 | 31.7 | 30.8 | 1.6 | .8 |
| 5,000 | 48.3 | 48.3 | 1.1 | 1.6 |
| 6,000 | 31.3 | 41.7 | 1.8 | .7 |
| 7,000 | 60.0 | 70.6 | 3.3 | 3.5 |
| 8,000 | 29.4 | 33.3 | 1.5 | 3.3 |
| 9,000 | 50.0 | 57.1 | 14.5 | 2.8 |
| 10,000 | | | | |
| 11,000 | | 33.3 | | .4 |
| 12,000 | | 33.3 | | 6.6 |
| 13,000 | | 50.0 | | 3.0 |
| 14,000 | | 50.0 | | 12.3 |
| 15,000 | 100.0 | 80.0 | 7.3 | 1.7 |
| 16,000 | | 100.0 | | 11.2 |
| 17,000 | | 33.3 | | 1.0 |
| 18,000 | | | | |
| 19,000 | | 40.0 | | 3.0 |
| 20,000 | | 50.0 | | 2.0 |
| Over 20,000 | | 20.0 | | 1.1 |

Table V reads: In analyzing a uniform number of pages for each student, It is noted that at the 1,000 level the per cent of the different words missed to possible different words missed is .1 per cent for Test I, for Test II, it is .8 per cent.

In analyzing a uniform number of pages for each student, it is noted that at the 1,000 level the per cent of total words missed to possible words missed is .0 for both Test I and Test II.

TABLE VI

RATIO OF TIMES MISSED TO WORDS MISSED BY THE STUDENTS TAKING TESTS I AND II, ANALYZING A UNIFORM NUMBER OF PAGES AND THE ENTIRE AMOUNT READ BY EACH STUDENT

| | Test I | | Test II | |
|---|---|---|---|---|
| Thorndike Rating | Uniform | Entire | Uniform | Entire |
| 1,000 | 2.0 | 1.4 | 1.0 | 1.1 |
| 2,000 | 4.9 | 3.3 | 1.9 | 1.5 |
| 3,000 | 6.7 | 6.0 | 4.8 | 2.2 |
| 4,000 | 14.9 | 8.9 | 6.9 | 4.4 |
| 5,000 | 6.8 | 9.5 | 8.8 | 7.5 |
| 6,000 | 17.6 | 11.6 | 4.2 | 6.2 |
| 7,000 | 16.3 | 14.9 | 12.8 | 7.8 |
| 8,000 | 15.0 | 12.2 | 25.8 | 10.8 |
| 9,000 | 87.0 | 26.9 | 12.8 | 5.4 |
| 10,000 | | 2.4 | | 6.1 |
| 11,000 | | 20.7 | 3.0 | 11.6 |
| 12,000 | | 2.0 | 52.0 | 14.8 |
| 13,000 | | 9.3 | 16.0 | 14.3 |
| 14,000 | | 1.0 | 65.0 | 54.0 |
| 15,000 | 217.0 | 58.5 | 5.8 | 15.8 |
| 16,000 | | | 29.5 | 27.2 |
| 17,000 | | | 8.0 | 3.5 |
| 18,000 | | | | 10.8 |
| 19,000 | | 3.5 | 20.0 | 17.3 |
| 20,000 | | | 9.7 | 13.3 |
| Over 20,000 | | 12.8 | 14.0 | 11.3 |

Table VI reads: In Test I, analyzing a uniform number of pages, the ratio of times missed to words missed in the Thorndike scale, in the 1,000 rating, is 2.0. Analyzing the entire pages read by each student, the ratio is 1.4.

In Test II, analyzing a uniform number of pages, the ratio of times missed to words missed in the 1,000 level is 1.0. For the entire pages read by each student, the ratio is 1.1.

and varying materials read, there is a decided increase in words missed. The curves in this graph seem to be very close together, indicating that the two tests are valid.

Tables V and VI make it possible to compare at a glance the data found in each table and graph preceding.

Both tests were given to the same group of people, and even though they were from different books, they seem to show the same thing--that there is a definite increase in difficulty at the seven thousand level. The similarity of the two tests and the results obtained from them indicate that this is a reliable method of testing vocabulary burden. Therefore, it may be concluded that these tests did measure the vocabulary level and the vocabulary level is at the seven thousand level.

The seven thousand level, therefore, is the logical starting point at which authors should begin to simplify the vocabularies of everyday business training textbooks for ninth grade students.

# CHAPTER III

## INVESTIGATION OF OUR BUSINESS LIFE

One of the purposes of this investigation, as has been previously stated, is to analyze Our Business Life by Lloyd L. Jones to determine:

1. The number of words found in the book which ninth grade students have difficulty in understanding.
2. The placement of these words in the Thorndike scale.
3. The frequency of occurrence of these words.
4. The total number of difficult words in each thousand level, according to the Thorndike scale.
5. The number of difficult words not found in the Thorndike list.
6. The percentage of different difficult words in each thousand level.
7. The number of difficult words used once, twice, three, four, five, six, seven and more than seven times by the author.
8. The number and frequency of difficult words defined or explained by the author.

Our Business Life was analyzed and each word above the seven thousand level in the Thorndike list of 20,000 words was underlined and the rating noted. With the exception of chapter headings, pictures, charts, diagrams, preface, table of contents, and index, the entire book was analyzed. The words found in the problems, suggested reports and supplementary material were tabulated separately from the words found in the solid reading matter.

According to Thorndike's classification:

> Except for special reasons, separate entries are not made of plurals in s; plurals where y is replaced by ies; adverbs formed by adding ly; comparatives and superlatives formed by adding er and est, or r and st; verb forms in s, d, ed, and ing; past participles formed by adding n, and adjectives formed by adding n to proper nouns.
>
> Where separate entries do occur, it is because the derived word is likely to offer some difficulty to pupils, and not to be known easily from knowledge of the primary word. Thus, likely would not be known from like; being and building should probably often be learned independently of be and build; and coming may appear in the work of Grade I before there has been enough experience of ing to enable the pupil to derive it by himself.[1]

If the meaning of compound words or phrases would be destroyed by separation they were treated as difficult words above the 20,000 level and not separated.

If hyphenated words had different meanings from the meanings as separate words they were likewise treated as difficult words.

When the entire book had been analyzed each different word which had been underlined was written on a card with the Thorndike rating. As that word was found again in the text, it was tabulated again on the original card. Thus, client $^{7}$ 6 meant that client was in the 7,000 level and had been used six times in the book.

All cards for each thousand level were grouped together and the words therein listed alphabetically. Lists were then made showing the words in each thousand level with the frequency of occurrence. As has been stated before, these lists were made separately for the solid reading material and the exercises, problems and supplementary material.

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1 Edward L. Thorndike, A Teacher's Word Book of 20,000 Words, Revised, Bureau of Publications, Teachers College, Columbia University, New York, 1932, p. iv, v.

Table VII shows the number and frequency of the different difficult words found in Our Business Life. The actual difficult words, their placement and the frequency of occurrence are found in the Appendix. In the solid reading matter there is a total of 1263 different difficult words above the 6,000 word level. These words are used a total of 4593 times. It should be noted that there are at the 7,000 level, 120 or 9.5 per cent of the total difficult words--in the solid reading matter. These 120 words are used 961 times or 20.9 per cent of the total frequency of difficult words. At the 8,000 level there are 155 different words, 12.5 per cent of the total difficult words. These 155 words are used 726 times which is 15.8 per cent of the total number of times the difficult words are used in the solid reading matter of the book. With only two exceptions the number and per cent of difficult words decrease steadily thereafter. In general, the frequency of these words decreases in similar fashion. It should be noted that 392 or 31.0 per cent of the total number of difficult words, are above the 20,000 word level in the Thorndike scale. These words used so occasionally that they are not included in the Thorndike list are used a total of 866 times, 18.9 per cent of the total frequency of difficult words.

In the exercises, problems and supplementary materials, there are 638 different words above the 6,000 level. These words are used a total of 1879 times. The greatest frequency, both as to the number of different words and their frequency of use, in this type of material, is at the 7,000 level. There are 105 different difficult words at the 7,000 level, constituting 16.5 per cent of the total. They are used 442 different times constituting 23.5 per cent of the total frequency of difficult words. At the 8,000 level there are 84 words or 13.2 per cent of the total difficult words. These words are used 251 times, constituting 13.4 per cent of the

TABLE VII

NUMBER AND FREQUENCY OF DIFFERENT DIFFICULT WORDS FOUND IN OUR BUSINESS LIFE BY LLOYD L. JONES

| | Solid Reading Material | | | | Exercises, Problems, and Supplementary Material | | | |
|---|---|---|---|---|---|---|---|---|
| Thorndike Level | No. Dif. Difficult Words | Per Cent Difficult Words | Frequency Difficult Words | Per Cent of Total Difficult Words | No. Dif. Difficult Words | Per Cent Difficult Words | Frequency Difficult Words | Per Cent of Total Difficult Words |
| 7,000 | 120 | 9.5 | 961 | 20.9 | 105 | 16.5 | 442 | 23.5 |
| 8,000 | 155 | 12.3 | 726 | 15.8 | 84 | 13.2 | 251 | 13.4 |
| 9,000 | 108 | 8.6 | 461 | 10.0 | 51 | 8.0 | 170 | 9.0 |
| 10,000 | 93 | 7.4 | 347 | 7.6 | 37 | 5.8 | 128 | 6.8 |
| 11,000 | 67 | 5.3 | 222 | 4.8 | 28 | 4.4 | 85 | 4.5 |
| 12,000 | 67 | 5.3 | 212 | 4.6 | 40 | 6.3 | 120 | 6.4 |
| 13,000 | 44 | 3.5 | 242 | 5.3 | 19 | 3.0 | 114 | 6.1 |
| 14,000 | 50 | 4.0 | 141 | 3.1 | 30 | 4.7 | 79 | 4.2 |
| 15,000 | 33 | 2.6 | 70 | 1.5 | 19 | 3.0 | 26 | 1.4 |
| 16,000 | 26 | 2.1 | 58 | 1.3 | 10 | 1.6 | 21 | 1.1 |
| 17,000 | 22 | 1.7 | 78 | 1.7 | 17 | 2.7 | 33 | 1.8 |
| 18,000 | 37 | 2.9 | 63 | 1.4 | 22 | 3.4 | 37 | 2.0 |
| 19,000 | 23 | 1.8 | 107 | 2.3 | 13 | 2.0 | 56 | 3.0 |
| 20,000 | 26 | 2.1 | 39 | .8 | 9 | 1.4 | 10 | .5 |
| Over 20,000 | 392 | 31.0 | 866 | 18.9 | 154 | 24.1 | 307 | 16.3 |
| TOTALS | 1263 | 100.1 | 4593 | 100.0 | 638 | 100.1 | 1879 | 100.0 |

Table VII reads: There are 120 different difficult words in the 7,000 level found in the solid reading matter of Our Business Life. This is 9.5 per cent of the total difficult words, and the words occurr 961 times or 20.9 per cent of the frequency of the total difficult words. There are 105 different difficult words in the 7,000 level found in the exercises, problems and supplementary material of Our Business Life. These words form 16.5 per cent of the total difficult words found and they occur 442 times or 23.5 per cent of the frequency of the total difficult words.

total times the difficult words are used in the supplementary material. Although, in general, the number and per cent of difficult words decrease progressively to the 20,000 word level the progression is not regular as in the case of the solid reading matter. Neither is the frequency of use of difficult words progressively small. There are 154 words above the 20,000 level, or 24.1 per cent of the total. These difficult words are used 307 times constituting 16.3 per cent of the total number of times difficult words are used.

Table VIII shows the number of different difficult words found in Our Business Life according to their frequency of occurrence. Of the 1263 different words used in the solid reading material, 745 or 59.0 per cent are used only once. A total of 198 words are used only twice. This is 15.8 per cent of the total difficult words. Thus, more than three-fourths of the words above the 6,000 word level, which is the reading level of ninth grade children, are used only once or twice. Only about one-eighth of the different difficult words are used five times or more. A similar situation is apparent in the exercises, problems and supplementary material with respect to the number of different difficult words, and their frequency. Of the 638 different difficult words in this type of material 343 or 53.8 per cent are used only once, and 113, 17.7 per cent are used only twice. These two groups constitute nearly three-fourths of all the words above the reading level of ninth grade children. About one-seventh of the words are used five or more times in this type of material. It is questionable whether or not the repetition of these difficult words is sufficient to fix the vocabulary.

TABLE VIII

THE NUMBER OF DIFFERENT DIFFICULT WORDS FOUND IN OUR BUSINESS LIFE THAT OCCUR ONCE, TWICE, THREE, FOUR, FIVE, SIX, SEVEN, AND MORE THAN SEVEN TIMES

| | Solid Reading Material | | Supplementary Material | |
|---|---|---|---|---|
| Frequency Of Occurrence | No. Dif. Difficult Words | Per Cent of Different Difficult Words | No. Dif. Difficult Words | Per Cent of Different Difficult Words |
| 1 | 745 | 59.0 | 343 | 53.8 |
| 2 | 198 | 15.8 | 113 | 17.7 |
| 3 | 93 | 7.4 | 45 | 7.1 |
| 4 | 61 | 4.8 | 39 | 6.1 |
| 5 | 37 | 3.0 | 19 | 3.0 |
| 6 | 31 | 2.5 | 17 | 2.7 |
| 7 | 78 | 6.2 | 13 | 2.0 |
| More than 7 | 20 | 1.6 | 49 | 7.7 |
| TOTALS | 1263 | 100.3 | 638 | 100.1 |

Table VIII reads: 745 of the different difficult words found in the solid reading matter of Our Business Life occur only once, and 343 of the different difficult words found in the supplementary material occur only once. That is, in the solid reading matter, 59.0 per cent of the total different difficult words occur only once; in the supplementary material, 53.8 per cent of the total different difficult words occur only once.

By counting the actual number of words found on several of the pages in the book and multiplying the average by the number of pages in the book, it is found that there are in the entire book approximately 193,500 words. By adding the total frequency of difficult words found in the solid reading matter, 4593, and the frequency of difficult words in the exercises, problems, and supplementary material, 1879, it is found that in the entire textbook, there are 6,472 difficult words. These 6472 difficult words constitute 4.0 per cent of the total running words. While 4.0 per cent may not appear to be a very heavy vocabulary burden, the fact that the running words include such words as a, the and is, must not be overlooked. It should be noted that in this book of 645 pages, there are 6472 difficult words or an average of 10 difficult words on each page. In an assignment, then, of ten pages, there would be approximately 100 difficult words which a ninth grade student would encounter.

In the solid reading matter, which constitutes approximately 472 of the total 645 pages, there are 1263 different difficult words. That means that on the average there are 2.7 new words on each page and these words occur 9.8 times on the page. There are, in the textbook, approximately 173 pages of exercises, problems and supplementary material. It should be noted that 638 different difficult words occur in this material or an average of 3.7 different difficult words per page. These difficult words occur an average of 11 times per page.

## Defined Words

> In considering the data just presented, however, one must keep in mind the fact that the number of different difficult words which are introduced into the vocabulary of a textbook constitute only one important factor in the difficulty which the pupils may encounter

> in comprehending the materials in the book. Other factors which may be equally as important are (1) the frequency with which the difficult words are repeated throughout the text . . . . (3) the actual percentage of difficult words which the author defines in his text . . . .[2]

> To restrict the vocabulary of any textbook to only those words or that level of vocabulary which represents the pupil's state of development in word comprehension at the time he begins the study of the course would result in a failure to achieve an important aim of teaching, namely, to increase the pupil's vocabulary as the study of the course proceeds . . . . It seemed desirable, therefore, to determine the numbers and percentages of difficult terms—that is, those found in or above the 7,000 level which the authors defined.[3]

Our Business Life was analyzed to determine the number of different difficult words which were defined by the author. A word was considered defined if explained by words below the 7,000 level.

A total of 145 different difficult words are defined by the author. These words occur 1158 times in the textbook. These 145 words constitute only 11.5 per cent of the total different difficult words found in the solid reading matter and the frequency, 1158, constitutes 25.2 per cent of the total difficult words found in the solid reading matter. The defined words, their placement in the Thorndike scale and their frequency of occurrence may be found in the Appendix.

These defined words are found in the solid reading matter. Only a very few words in the supplementary material are defined. Since many of the words found in the supplementary material have been defined in the solid reading matter, no tabulation is made of these defined words.

It is assumed, since 145 different difficult words are defined satisfactorily by the author, that these words and their frequencies should be substracted from the total different difficult words and their

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2 Francis D. Curtis, op. cit. p. 68.

3 Ibid., p. 75.

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frequencies to obtain the actual reading difficulty encountered by ninth grade students in reading this textbook. This would mean that 145 words should be substracted from the 1263 total different difficult words found in the reading material, to get the actual vocabulary burden of students in the ninth grade.

# CHAPTER IV

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Two tests from material generally included in a course in everyday business training given to 301 ninth grade students show that the vocabulary level for ninth grade students in comprehending meanings of words is between the six and seven thousand level according to the Thorndike list of twenty thousand words. That is, in reading economic matter ninth grade students have decided difficulty with words beginning at the seven thousand level.

This level was used as a norm for the analysis of Our Business Life, which is designed for ninth grade students. The analysis shows that in the solid reading matter there are 1263 different difficult words at the 7,000 level or above. This is an average of 2.7 difficult words per page and these words occur 4593 times or an average of 3.6 times per word. In the exercises, problems and supplementary material there are 638 different difficult words, that is, above the 6,000 level, and these words occur 1879 times. This is an average of 3.0 difficult times per word and these difficult words occur an average of 11 times per page. This indicates a rather heavy vocabulary burden for ninth grade students.

Of the total 1263 difficult words which appear in the solid reading matter 392, or 31.0 per cent of the words are not included in the Thorndike list. Of the 638 difficult words found in the exercises, problems and supplementary material 154 or 24.1 per cent of the words are above the 20,000 level. It is questionable whether or not the author should use so many words which occur so occasionally that they are not included in the Thorndike list.

Of the 1263 different difficult words in the solid reading matter, 745 or 59.0 per cent of the words occur only once and 198 or 15.8 per cent occur only twice. Thus, three-fourths of the words above the vocabulary level of ninth grade students are not repeated or are repeated only once. Only 13.3 per cent of the total words occur as many as five times. In the exercises, problems, and supplementary material, 343, or 53.8 per cent of the words occur only once and 113 or 17.7 per cent occur only twice. Thus, almost three-fourths of the words are not repeated or are repeated only once. Only 15% per cent of the words occur as many as five times. This affords little opportunity, by repetition, for the students to master the vocabulary of this book.

In the entire textbook, there are approximately 193,500 running words, and 6,472 of these are difficult words. That is, approximately 4.0 per cent of the total running words in the books are difficult for ninth grade students. Although this may not appear to be a very heavy vocabulary burden, it must be remembered that these 193,500 words include such words as a, the, and is. There are, in this book of 645 pages, 6472 difficult words or an average of 10 difficult words on each page. Thus, in an assignment of ten pages, the ninth grade students would encounter 100 difficult words. In the solid reading matter, there are, on the average, 2.7 different difficult words on each page and these words occur 9.8 times on each page. In the exercises, problems and supplementary material, there are, on the average, 3.7 different difficult words per page and these difficult words occur an average of 11.0 times per page.

Of the 1263 different difficult words occurring in the solid reading matter, 145 or 11.5 per cent are defined with other words found in the first six thousand levels of Thorndike's list. Thus, very few of the difficult words are explained with words which the ninth grade student understands.

In the light of the above data, it is recommended that the author provide more adequately for the pupils to learn new words—by repetition, definition or illustration, and that the author limit the number of different difficult words in everyday business training textbooks.

# BIBLIOGRAPHY

Collins, Ruth S., A Study of the Vocabulary Burden of Hunter and Whitman's Problems in General Science, University of Michigan, Master's Thesis, 1936.

An analysis of a science textbook, using the underlining method.

Curtis, Francis D., Investigations of Vocabulary in Textbooks of Science for Secondary Schools. Boston: Ginn and Company, 1938.

The procedures, and findings of one hundred investigations in the field of science.

Crabbe, Ernest H. and Slinker, Clay D., General Business, Third Edition, Cincinnati: South-Western Publishing Company, 1936.

An everyday business training textbook.

Klstad, Alvin Orrie, A Study of the Vocabulary Burden of Modern History in the Jamestown Senior High School. University of North Dakota, Master's Thesis, 1937. A study to determine if there is history vocabulary and the relationship between that and pupil progress.

Gates, A. I., Interest and Ability in Reading. New York: The Macmillan Company, 1930.

A study of the correlation of interest to ability in reading.

Jones, Lloyd L., Our Business Life, Complete Edition: New York: Gregg Publishing Company, New York, 1936.

An everyday business training textbook.

Kirk, John G.; Buckley, Harold E; and Waesche, Mary A., Introduction to Business, Third Edition, The John C. Winston Company, 1933.

An everyday business training textbook.

Roseboro, Eugene Jones, An Analysis of the Vocabulary Burden of Twelve Elementary French Reading Textbooks. Ohio State University, Master's Thesis, 1937.

A comparison and analysis of the difficult words found in twelve elementary French reading textbooks.

Thorndike, Edward L., A Teacher's Word Book of 20,000 Words, Revised. New York: Bureau of Publications, Teachers College, Columbia University, 1932.

A list of most frequently used words and their rating in the English language, taken from over 200 sources.

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## THE REASONS FOR BUSINESS

### Section I. The Purpose of Business

Our Standards of Living. None of us has everything that he wants. When we compare everything that we have with what we would like to have, we seem to have very little. But when we compare what we now have with what people had in previous ages, we find that we have very much.

Our schools are much more complete and offer many types of instruction that have not been available heretofore. In fact, not many years ago, only an unusually fortunate person was permitted to go to high school. This is indicated by the fact that as recently as 1880 less than 3 per cent of the persons of high-school age were enrolled in public secondary schools. Fifty years later, approximately one-half of those of high-school age were enrolled in public schools, and in addition many others were enrolled in private and parochial schools. A high-school education, which was formerly the privilege of only a few, is now available for everyone.

Our towns and cities are now much more attractive places in which to live than they were a few centuries ago. In those days the streets were not paved, and they were almost without lights at night. No city had streetcar lines, busses, or other means of rapid transit. Even the best of the homes were without the simplest of modern conveniences. Light was furnished largely by candles. Now the electricity used in our homes for lighting purposes requires the use of millions of lamps, each of which gives more light than many candles.

Not only is electricity the source of light, but it also is a very valuable source of power. In homes it operates many devices, such as washing machines, refrigerators, radios, and vacuum cleaners. In factories it drives the machinery that makes possible the production of many things that we use. In ancient times slaves were forced to work continuously in order that their masters might enjoy some leisure. Now the electric power used equals the labor of many millions of men. In other words, each of us has, in factories or elsewhere, electric power working for him that is equal to the labor of at least one slave who would work every hour of every day. As a result leisure is available for all, and no one is required to work continuously.

Our cities have changed greatly within recent years, but changes are even more notable in the rural districts. A hundred years ago there were few roads that could be called improved. Farms only twenty miles from a city were remote and difficult to reach. Now we have almost three-quarters of a million miles of surfaced highways reaching into every part of the country. With modern transportation, schools, churches, and markets are available to rural sections as they never were before.

The examples given here are only a few of those that could be given to illustrate the extent of the changes in living conditions within relatively recent years. When we study living conditions as they were a few centuries ago, we find that then even the most wealthy did not have many of the conveniences and comforts that almost everyone now has.

Business Increases Wealth. If the individual had to depend upon himself to make everything he used, he would have little more than what the poorest savage had. Suppose, for example, that the only way in which you could obtain a pair of leather shoes was to make them and that you could not procure from others any of the needed materials. It would be necessary for you first to prepare the leather. This would require that you kill an animal, remove the hide, and complete the tanning process. It would be necessary then to cut out the leather according to a pattern that you had devised, and to sew the parts together. The sewing would have to be done with rude substitutes for thread and a needle, such as you could make. The result would be, at best, a crude covering for your feet, inferior to Indian moccasins.

Although an almost unlimited amount of work would be required in making a poor substitute for shoes, a person can buy a pair for no more than the amount that he receives for a few hours of work. As a result of business activities, great tanning organizations have collected hides from all parts of the world and have made durable leather from them. Factories have purchased this leather and, through the use of much machinery and the co-operation of many people, have made great numbers of shoes. These shoes have been carried by other business organizations to all parts of the country and have been made available for purchase in retail stores.

Thus business, through the use of machinery and other equipment, and through the co-operation of many people, has enabled a person to exchange a few hours of work for something that he himself could not produce within weeks, if he could produce at all. Although business activities are of many kinds, all of them have the same purpose; that is, to enable people to satisfy their wants more fully than would otherwise be possible.

Business and Profits. Businesses are organized and conducted to render services and thus to enable people to satisfy their wants. A business is usually successful in proportion to the services that it renders its customers. One organizing a business must therefore consider how he can best serve his customers, for if he cannot render satisfactory service his venture will be a failure. Nevertheless, when a business is being organized, the primary purpose is usually not to render service, but to earn a profit.

Suppose a truck gardener rents a piece of land, raises vegetables on it, and sells them in a neighboring city. He renders a service in that he makes it possible for others to buy food from him. The reason why he has gone into business, however, is that he believes he can sell the vegetables for more than they cost him in rent for the land on which they were grown, in labor, and in other expenses. If, after operating his farm for a few years, he finds that he is not making a profit, he probably will change his occupation, as otherwise he will not be able to make a living.

Likewise a business that makes shoes does so because it can sell them for more than the cost of production. An individual may pay, in return for a pair of shoes, only the income received for a few hours' work. This amount is much less than the cost would be if he made the shoes himself. Even this amount, however, is more than the cost to the manufacturer in materials, labor, and other items. The use of machinery that can make thousands of articles exactly alike makes it possible to produce manufactured articles at a very low cost. If manufactured goods could not be sold for more than the cost, there would be no incentive to build large factories and to equip them with expensive machinery.

These are examples of the fact that men engage in business in order to make a profit. Without the hope of earning a profit, there would be no incentive to organize and operate a business. If a business cannot be made profitable, it will, in time, be discontinued.

## Section II. The Materials of Business

Elements Used by Business. Businesses are organized to earn a profit by rendering services. These services differ widely. Some businesses prepare and distribute food and clothing. Others provide transportation, protection, entertainment, and the innumerable other services that people demand. Although the activities rendered by different business organizations vary widely, all businesses are alike in that they expect to render services and thereby to earn a profit. In accomplishing these purposes, businesses use four elements: natural resources, labor, capital, and management.

Natural Resources. Nature is the great storehouse from which we get everything that we use. Our fertile lands make possible the crops from which most of our food comes. Our forests provide lumber for buildings and for many other purposes. From our mines we obtain coal, which is a source of power and heat, and a great variety of minerals from which metal products are made. Our oil wells provide oil, which is used almost everywhere as a source of power and for many other purposes. Our rivers provide not only avenues for transportation, but also a great source of power, which probably will be used more and more in the future. Our quarries provide the stone that is used in many of our great buildings.

These examples are only a few of the many that might be given to illustrate that everything we have comes from nature. When we observe a powerful airplane, a magnificient building, a beautiful painting, or the intricate mechanism of a watch, we are inclined to think mostly of man's skill in manufacturing. It is true, however that each of these items and, in fact, everything that we might mention is made of materials derived from nature. Without natural resources we could make or produce nothing.

Labor. Although everything we have is derived from natural resources, few of these resources are in the forms in which they can be used by average persons. Before natural resources can be used, labor must be applied to them. The great trees in the forests are of value to a person who wishes to build a house in one of our large cities only after people fell the trees, make them into lumber, and transport the lumber over long distances. The coal underground becomes useful as a source of heat and power only after it has been mined and, in many cases, after it has been carried many miles. The iron ore in a mine is of value to people in all parts of the country only after it has been mined, refined, and made into iron and steel. A purpose of business is to take natural resources, to apply labor to them, and thus to make them available for use.

Capital. More than labor is required in converting natural resources into the things that we want. A savage spends weeks upon weeks in burning out and shaping a log in order to make a small, crude boat. Much of the story of Robinson Crusoe tells how he made natural resources into usable forms. It took him forty-two days to cut out a single board to be used as a shelf, although Crusoe was not entirely dependent upon his own labor, for he had a small axe that had been made by someone else. With

better tools he could have made his shelf much more quickly, but without any tools he could not made it in the time he did.

Business uses buildings, equipment, and supplies in making the things that we use. For example, in the production of automobiles, machines valued at many thousands of dollars are housed in great expensive buildings. The supplies used may have been collected from all parts of the world. Such buildings, equipment and supplies--in fact, all things that are available as a result of past activities--are known as capital. The term capital is sometimes used to refer only to money; but, as it is used here, it refers to everything of value that we now have. Capital is one of the important elements that business uses in making possible the satisfaction of our wants. Without capital, business could not produce the many things that we use, and we would immediately revert to a condition like that of savages.

Management. Suppose that a plant equipped to produce automobiles was turned over to one thousand men collected at random from the streets of your city. You would not expect any automobiles to be produced because the men would not have the technical knowledge and skill needed to operate the plant. Furthermore, they would not know the work that each was to do, where the materials to be used in the manufacturing process were to be obtained, or what was to be done with the finished product.

Gathering together in a newspaper plant a number of people who can write and the supplies necessary for the production of the newspaper will not result in one of our wonderfully complete daily newspapers. Different persons must direct the gathering of news from all over the world, the editing of the news, the collecting and arranging of the advertising, and the multitude of other things required in the preparation of each edition. This direction is possible only when there is a complete organization in which each individual has a certain share of the work to do.

It is apparent then that management, like natural resources, labor, and capital, is necessary in the production of usable goods. Only through the use of all four of these elements is business able to satisfy the great variety of wants of the people.

## Section III. The Business of Production

Meaning of Production. One of the important services rendered by business is the making or producing of goods that we need or want. For example, the farming industry produces food, materials for clothing, and many other raw materials; the mining industry produces metals, which are used in thousands of ways; the fishing industry adds much to our food supply; and factories make articles of many kinds. As a result of the activities of business, goods are available for our use. These activities are known as production.

Agriculture. When we think of business, we sometimes do not think of agriculture. Agriculture is, however, one of our largest businesses. More than ten million people are employed on farms. The amount of the income from farm crops has, in many years, been more than ten billion dollars.

About one hundred years ago farming could scarcely be classified as a business. Each farmer was occupied in raising the things that his family needed. Little produce was sold, and therefore few goods manufactured by others were purchased. Each farm was largely a self-sustaining unit that dealt to a very small degree with others. Within recent years conditions on farms have changed greatly. Especially notable is the increased use of machinery. Farming was formerly done almost entirely with hand labor. It is now done largely with machines. The value of farm machinery for each farm worker has, in seventy-five years, increased 400 per cent. A farmer of one hundred years ago worked ten hours a day for six days in order to plant, care for, and harvest an acre of wheat. With the most modern and efficient machinery the farmer of today can do the same work in a few hours. Farming is, then, depending no longer solely on hand labor; but, like our modern factories, it uses much expensive labor-saving machinery.

Agriculture is frequently spoken of as our basic industry. Without modern agriculture our great cities, our enormous factories, and our extensive transportation systems would be impossible.

Mining. Another basic industry is the obtaining of minerals from the earth. This industry is scarcely less important than agriculture. Consider how our activities and the activities of business would be handicapped if we were without only two of our well-known minerals--iron and coal.

Iron, or steel made from iron, is required in the manufacture of almost all kinds of machinery. Our farms and our factories are equipped with machinery that is made from iron. Our means of transportation, that is, our trains and the rails on which they run, our trucks and other automobiles, are constructed from the products of iron. Even many of our buildings are supported by steel beams or are reinforced with steel. Coal is a source of power for thousands of our factories and, in much of the country, is a source of heat for homes, offices, and factories during the cold winter months.

When we try to imagine what we would do without iron and coal, we think of things that could be substituted for them. For iron we might use other metals; for coal we might, to a certain extent, substitute other fuels, such as oil. These substitutes are, however, also products of our mines. It is evident that, without the products of mines, modern methods of produc ing and distributing goods of all other types would be impossible. The advanced stage of civilization that we now have would necessarily cease to exist.

Mining is not so widespread as agriculture, for it is dependent upon certain sources of supply, which are not available everywhere. It is, however, an important industry. Its employees are about one million in number, and the value of its products is more than four billion dollars a year.

Forestry and Fishing. These industries are not so extensive as agriculture and mining, but they are nevertheless important. They employ more than a quarter of a million people. From our forests we obtain the lumber needed for the construction of buildings, furniture, and other articles of many kinds. The amount of lumber produced in an average year is so great that, if it were piled in one stack, the stack would be one thousand feet square and more than a half mile high. Our fisheries add much to our total food supply. Each month the value of their products amounts to several million dollars.

Manufacturing. Manufacturing differs from the forms of production that have been discussed heretofore in that it does not produce anything entirely new. It takes the products of agriculture, mining, forestry, or fishing, and from them produces articles that we can use. From minerals it makes machinery, automobiles, and trains. From leather it makes shoes. From wool and cotton it makes clothing. From wheat it makes flour. In fact, it takes raw materials of all kinds and makes them into the many articles that we wish to use.

More than fourteen million workers are engaged in the manufacturing and mechanical industries. There are, then, more people in this group than in the group of agricultural workers or in any other one group. The value of manufactured products has, in one year, been more than seventy billion dollars, or more than five hundred dollars for each person in the United States.

Summary. Of the various services that business renders, the production of useful commodities is one of the greatest. Without this service we would be limited to the use of goods that we ourselves could make. They would be very few. Our relatively high standard of living, and, in fact, our civilization itself depend upon the production of goods by business enterprises.

## Section IV. The Business of Distribution

Need for Distribution. We observed in preceding sections that business serves the public by producing goods that can be used. But the production of goods is not enough. These goods must be made available for the persons who wish to buy them.

For example, the shoes you wear may have been made in Lynn, Massachusetts; the watch you carry, in Cincinnati, Ohio; and the breakfast food you eat, in Cedar Rapids, Iowa. To buy shoes, a watch, or breakfast food, you do not go to Lynn, Cincinnati, or Cedar Rapids. You go instead to retail stores that offer such goods for sale.

Retail stores do not ordinarily manufacture goods for their customers. They do, though, render a service that is very necessary. They make goods available when and where people want them. If you wish to buy a bicycle or a suit of clothes, you need not go to a manufacturer. That probably would be inconvenient, if not impossible. Rather you go to a retail dealer who has a number of bicycles or to one who has many different suits, and make a selection. Not only are you helped by having the goods at hand where you can examine them, but you also find in the many stores in your community a wider variety of goods than you probably would find at the plant of one manufacturer.

Retail Stores. Retail stores vary in size from the great department stores, employing hundreds of salespeople and selling many different kinds of merchandise, to small stores having only one or two clerks and carrying in stock only a few kinds of merchandise. They all serve the same general purpose in that they gather together goods that may have come from all parts of the world and make them available. when and where customers want them. The number of articles from which a buyer may make a selection can hardly be counted. For example, a rather small hardware store serving only a limited area may carry thousands of articles in stock, and large stores carry many more.

A retail store must pay its operating expenses, such as rent, salesclerks' salaries, and taxes. It also should earn a profit for the owner to repay him for the trouble of operating the store and to give him some return on the capital invested in merchandise and store equipment. In order to obtain funds for the payment of the expenses and to earn a profit, the retail store charges more for goods

than it pays for them, Even though the store does charge more for the goods than it pays, the customer usually saves by buying from it, for he probably would incur much expense if he attempted to go to a manufacturer for everything that he wished to buy. The service of the retail store, is, then, quite different from that of the manufacturer but is nevertheless important and necessary.

Wholesale Dealers. Wholesale dealers are dealers that purchase supplies from manufacturers and from other dealers and sell them in smaller quantities to retail stores. Retail stores could, of course, purchase their supplies directly from manufacturers, but for several reasons they often find it desirable to purchase from wholesalers.

Large stores that buy in enormous quantities and that have a number of individuals who give much of their time to the purchase of goods can conveniently buy from manufacturers. Smaller stores, however, may find that it is inconvenient to buy directly from manufacturers. They can buy many of their supplies much more conveniently from a few wholesalers than they could from a large number of manufacturers. Furthermore, wholesalers are usually located near retail stores and therefore can supply the latter with goods quickly. As a result the retail stores can carry in stock rather small quantities of many different items. If the stock of any particular item is exhausted, a retail store can quickly obtain a new supply from the wholesaler. If, on the other hand, the retail store were buying from manufacturers only, it probably would have to send farther for the merchandise, and would therefore have to carry a larger stock of each item since replacements could not be obtained quickly.

The wholesaler must charge more for the merchandise he sells then he pays for it. He has certain expenses of operation; and he, of course, wishes to earn a profit on his investment. The fact that retailers buy through wholesalers does not necessarily mean that merchandise costs more than it would if the retailers bought directly from manufacturers. Frequently wholesalers can buy in large quantities, perhaps in carload lots, and can thus obtain very favorable freight rates. Retail stores, purchasing in smaller quantities, would have to pay greater freight charges if they bought from manufacturers in all parts of the country. In addition, buying through a wholesaler makes it possible for a retailer to reduce his expenses because of his ability to carry a smaller stock than otherwise would be required.

Regardless of whether goods are sold by the manufacturer directly to retail dealers or first to wholesalers and then to retail dealers, certain expenses in connection with the distribution of goods must be paid. These expenses include transportation charges, the cost of carrying goods in stock, and the costs of selling goods. These expenses are much the same regardless of the exact method of distribution.

Chain Stores. Chain stores are organized to combine the services of wholesale and retail concerns. A chain-store organization has a number of retail branches with one or more central distributing points from which these branches obtain their supplies. The chain-store organization frequently makes a saving in that the wholesale department does not have to make any effort to sell to the retail stores that it serves. In other words, it eliminates the expenses that a wholesale dealer would have in brining his merchandise before the retail dealers.

Chain-store organizations are of two principal kinds. In the first, all the retail stores, as well as the central distributing agency, are owned by one company.

In the second, the retail stores are independent distributors. These independent distributors agree to make their purchases through one central distributing point or purchasing agent. It is hoped that, in this way, the cost of obtaining merchandise by the retailer will be reduced, for each of the individual retail merchants should obtain the services of a wholesaler at the very lowest possible cost because the wholesaler does not have the usual selling expenses.

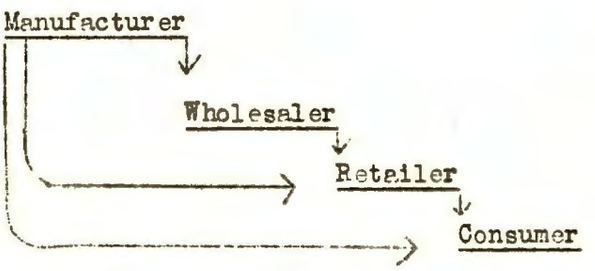
Selling by Mail. Many organizations do not maintain stores where people call and select their merchandise, but they sell by mail only. Some of these organizations are relatively small and sell only a few items. Others are very large and sell hundreds and even thousands of different items.

These organizations that sell by mail usually provide a prospective buyer with a catalog describing the merchandise available. This catalog is sometimes quite small, but the catalogs of large mail-order houses are almost as large as an unabridged dictionary and contain descriptions of items of almost every conceivable kind. Mail-order concerns make their sales in all parts of the country, but they are especially successful in selling to those in remote parts of the country, who cannot conveniently visit stores to make their selections.

A mail-order concern eliminates the expense of operating wholesale and retail stores. It has, however, other expenses. For example, the cost of distributing many thousands of large catalogs and other advertising material, which are sent through the mail, is enormous. The difference between the retail store and the mail-order house is, then, largely one of service. Each serves satisfactorily under

particular conditions. This is made evident by the fact that the two have flourished side by side for many years. That price is not a controlling factor is indicated by the fact that mail-order houses are most successful in those regions in which stores are all small and the selection of goods is limited.

Summary. Business serves the general public, not only by producing goods that can be used, but also by buying and selling these goods and thus making them available for the individual when and where he wants to buy them. Goods may be distributed by any one of several plans. They may be sold by the manufacturer directly to the consumer, by the manufacturer to a retailer, who in turn sells to the consumer; or by the manufacturer to a wholesaler, who sells to a retailer, from whom the consumer obtains the merchandise. The three methods are indicated by the following diagram:




All the plans involve similar expenses for advertising, carrying goods in stock, and handling the orders of individual consumers. Consumers usually buy from retail stores as this method is the most convenient and frequently the cheapest, but in some cases purchases may be made from manufacturers.

It will be observed that a part of the cost paid by consumers for merchandise is the cost of distribution. This includes the operating expenses and the profits of wholesale and retail dealers. For some products these costs make up a large percentage of the total cost of the merchandise to the consumers. This does not necessarily mean that the goods cost more than they would if the dealers were eliminated. Large factories can produce many types of goods in great quantities much more cheaply than they can produce them in small quantities. The cost of the merchandise produced in these factories is therefore cheaper to the distant consumers than it would be if the goods were made in each community. For example, matches can be manufactured in large quantities and sold first to a wholesaler, then to a retailer, and finally to you, much more cheaply than they could be made in small quantities in your town and sold directly to you.

## Section V. The Business of Financing

Value of Financial Organizations. The chief work of business is to produce goods that people want and to distribute these goods so that they are available when and where they are needed. Some organizations are engaged primarily in production; others, in distribution. Still others, however, neither produce goods nor distribute them. But these organizations are of value because they help businesses engaged in production and distribution to render services, and they aid individuals in using these services.

Services of Banks. As we have observed previously, some banks, known as commercial banks, accept deposits and permit customers to draw checks against the deposits. They serve in that they provide a convenient method of making payments and render it unnecessary for individuals and businesses to keep on hand large sums of money.

Other banks, known as savings banks, accept deposits but do not offer their customers checking privileges. They do, however, pay interest on deposits that are left with them for a certain length of time. The rate of interest is usually about 3 per cent; that is, the depositer receives about three dollars on each one hundred dollars deposited for a year. A savings bank does not serve its customers in the same way as a commercial bank, but it does offer its customers a convenient means of investing savings as they are accumulated.

Savings banks are sometimes operated separately from commercial banks, but most commercial banks have savings departments. If you deal with a bank of the latter type, you have the choice of depositing your money in the commercial department or in the savings department. Either department will render valuable service, although the service will not be exactly the same.

Source of the Bank's Income. When a customer deposits money in a bank, the bank does not promise to return the same money, but simply an equal amount. Until the money is withdrawn, the bank has a right to lend it to businesses or individuals who may need to borrow.

The balance of each customer may not be large, but all the balances together may make a large sum. The bank can safely lend a considerable share of the total amount, for it is probable that not all depositors will wish to withdraw their funds at the same time.

The bank charges interest on the money it lends. In this way it obtains the income needed to operate the bank, to keep a record of each depositor's account, to handle each depositor's checks, and to pay interest on savings. Other earnings may be obtained from charges made for miscellaneous services, but the chief source of income is interest.

Bank Services in Accumulating Funds. When banks receive the deposits of many people and thus make funds available for borrowers, they render valuable service to those in need of loans. For example, one business may need to borrow ten thousand dollars. If banks did not accumulate funds, it might be necessary for this business to borrow small amounts from a number of persons. Obviously, it is more convenient for the business to borrow the entire amount from one bank. It is probable that many businesses could not be adequately financed if banks did not serve communities by accumulating funds that can be loaned.

Safe-Deposit Vaults. A further service rendered by banks is the providing of a safe place in which to store valuable articles. Banks ordinarily have vaults in which customers may rent small boxes known as safe-deposit boxes. These boxes are well guarded and offer a maximum amount of safety. They are valuable for keeping jewelry and stocks, bonds, and other business papers. Rent is charged for the use of a safe-deposit box since the bank does not have the right to use anything placed in the box and thus has no other source of income from this service, such as it has from money left on deposit.

Other Services of Banks. In addition to the major services described in the foregoing paragraphs, banks render many other services. Many banks sell securities and thus assist their customers in investing funds. Other banks have travel departments to assist their customers in planning tours. Practically all banks are valuable sources of information about financial matters and are thus helpful to customers who are in need of such information.

Services of Insurance Companies. As was explained in Chapters XVII and XVIII, insurance companies are conducted to assume risks that individuals would otherwise have to bear. For example, a person who owns an uninsured building must bear the risk of losing his investment as the result of a fire or a storm. For a reasonable compensation an insurance company will assume this risk. The company this serves by removing the danger of a great loss, which the individual could not otherwise escape.

Life insurance companies also serve in that they provide a means of investing funds. When holders of certain types of policies pay the premiums, they obtain protection and at the same time accumulate cash values that can be withdrawn. For many persons the service of life insurance companies in providing a means of accumulating savings is almost as important as the service of such companies in providing a means of protection.

Insurance companies also serve in accumulating funds that can be borrowed by individuals and businesses. These funds are accumulated by the companies to pay policies that will become due in the future. Until the policies are due, the funds may be lent to those who wish to borrow money and who can give satisfactory security for the repayment of the loans. Many of our businesses are financed by insurance companies. Many individuals who wish to buy homes, farms, or other property are able to borrow money from insurance companies for this purpose. The funds accumulated by these companies are therefore useful to industries and business men.

Other Financial Organizations. In earlier chapters we have observed that other kinds of financial organizations, such as building and loan associations and credit unions, also collect the funds of many individuals and lend these funds to aid in the completion of business transactions. The organizations that we have studied in this section are sufficient, however, to illustrate the nature of the services of financial organizations. These organizations do not produce goods that individuals use, nor do they engage directly in the distribution of such goods. Nevertheless their services are valuable because they aid other businesses in producing and distributing.

## THE COMMUNITY ENCOURAGES BUSINESS

### Section I. The Community Provides Rules for the Organization of Business

Relation of Business and the Community. Business and business organizations are not something apart, with which we deal only when something is to be bought or sold. Business is closely related to the welfare of everyone. It is an important part of our social order. Its success brings prosperity; its failure brings poverty.

So largely is the general welfare dependent upon the success of business that the community as a whole aids business in a number of important ways. In return, business renders definite services to the community. In this chapter we shall observe how the community serves business. In the following chapter we shall observe how business serves the community.

Methods of Organizing a Business. In order to aid in the efficient operation of businesses of all sizes, the community has set up different ways in which a business can be organized. Under one method the business and those owning and operating it have certain rights or privileges and certain responsibilities. Under another method there may be other rights or privileges and other responsibilities. The same form of organization is not equally satisfactory for all businesses. The form that is satisfactory for a large company operating in all parts of the country may not be satisfactory for a small retail store operated by one or two men. For this reason various forms of business organizations have been developed. Their use is made possible by the community acting through its various law-making bodies. The three common types of business organizations are known as the sole proprietorship, the partnership, and the corporation.

Sole Proprietorship. A sole proprietorship is a business that is owned entirely by one individual. This type of organization is often found in the small independent retail store and in similar businesses that do not ordinarily require large amounts of capital.

Partnership. In a partnership two or more persons combine their capital and skill in conducting a business. They usually have a definite agreement regarding the amount of capital each is to contribute, the work each is to do, and the manner in which the profits and the losses are to be divided. If this agreement is in writing it is known as the articles of copartnership. Typical articles are shown in Figure 162.

Corporation. The third form of organization is known as the corporation. Before a corporation is established, a charter must be obtained from one of the states. The charter gives several persons permission to conduct a business in the name of the corporation. The business is known by the corporate name and all transactions are completed in that name.

As was explained in Chapter XVI, the ownership of a corporation is divided into parts, known as shares or shares of stock. The ownership of each person who invests in the corporation is represented by a stock certificate, which shows the number of shares that person owns. A certificate may be acquired by one individual and transferred to another, for, since the business is carried on as a corporation, it makes no difference, so far as the operation of the business is concerned, who owns the certificate.

Advantages of a Sole Proprietorship. The sole proprietor has great freedom. It is true that he is subject to some governmental regulations. With but few exceptions, however, he can open business at any time or in any place, can close it whenever he desires, and can sell or manufacture any kind of merchandise. He is not forced to consult others, nor to consider them when fixing his policies.

A sole proprietor is not bothered with legal formalities. In a partnership there must be a contract between the partners; a corporation must have a charter from one of the states and must submit reports annually; but a sole proprietor is free from such obligations.

The sole proprietor obtains all the profits made from his business. When a person is successful in making a business profitable, he may not wish to divide the profits with others. He would have to do so, however, in a partnership or a corporation.

Disadvantages of a Sole Proprietorship. A sole proprietor has certain disadvantages which in some cases make the partnership or the corporate form of organization preferable. Some of the disadvantages are:

The sole proprietor does not have the assistance of others interested in the business, which is highly desirable in a large one. One man cannot take care of everything or be an expert in directing all kinds of work. He can hire others to help him, but employees are liable not to be so efficient as those who have a financial interest in the business.

The sole proprietor may not have sufficient capital to conduct his business most effectively.

A sole proprietor must bear all the losses sustained by the business. He therefore takes greater risks than he would if several persons were interested in the business and the profits and losses were distributed among the group.

Advantages of a Partnership. A partnership is preferable to a sole proprietorship in that it combines the resources and the ability of two or more persons. The management should, then, be more capable and the resources should be greater than if one person were in business by himself. Furthermore, the risk of loss is divided among the partners, and the risk borne by each partner is therefore decreased.

Disadvantages of a Partnership. If a partnership is successful, the profits must be divided among the partners. A partner's share is therefore less than it would be if he were the sole owner of the business. The need for dividing profits tends, then, to offset the advantage coming from the division of the risk of loss.

Although the partnership may combine more ability than that possessed by a sole proprietor, each partner may be able to accomplish less than if he were working alone, because he must consult his partner or partners before acting. Furthermore, in this kind of organization the partner is bound by the agreements, or contracts, made by the other partner or partners, even if he knows nothing about the agreements and is not in favor of them. A poorly chosen partner may cause ruinous losses to a business.

For example, Herbert Dow formed a partnership with Earl Harvey to operate a grocery store in Jasonville. It was understood that Mr. Dow was to make all purchases; but, without consulting his partner, Mr. Harvey bought a delivery truck for $600 and equipment for a meat department for $2,100. These purchases were contrary to Mr. Dow's plan, since Mr. Dow did not believe it wise to make deliveries or to operate a meat department.

The partnership had no funds with which to pay for the truck and the equipment. It was therefore necessary for Mr. Dow to pay for them, because both partners were bound by the agreement. Furthermore, it was necessary for him to pay the entire cost of the equipment, and not simply a part of the cost, as his partner, Mr. Harvey, had no funds.

Regardless of the fact that partnerships have the disadvantages described above, this form of organization is quite common. A partnership is usually formed when individuals have entire confidence in each other and believe that the advantages of greater capital and increased skill in management will more than offset the necessity for the division of profits and the danger of loss through the acts of one partner.

Advantages of a Corporation. A member of a corporation cannot act as the agent of the company unless he is given specific authority to do so. This eliminates the danger of loss through the unauthorized acts of one member of the organization, and thus overcomes one of the disadvantages of the partnership.

Members have no liability for the debts of the corporation beyond their investments or beyond a fixed and limited amount in excess of their investments. This removes the danger of the loss of the private property of a member, which loss cannot be avoided in a sole proprietorship or a partnership.

Authority is centralized. Since the owners of a corporation cannot act unless given specific authority, it is possible to center the responsibility and authority in one person or a small group.

The proprietorship is represented by shares that are transferable. This makes it possible for an owner to sell all or part of his interest without affecting the corporation.

The shares may be owned by any number of persons. A corporation can therefore obtain its capital by selling shares of stock to a large number of people. This makes it possible to accumulate a great amount of capital required in the operation of a large organization.

Disadvantages of a Corporation. There are offsetting disadvantages to the corporate form.

The taxes of corporations are frequently heavier than those of partnerships or sole proprietorships; reports of operations must be given to the state and the National Government; and the activities of the corporation are limited to those mentioned in the charter. As a result a corporation may have expenses and limitations to its activities that a partnership or a sole proprietorship does not have.

The division of the ownership into a large number of shares that are owned by many people aids in accumulating large amounts of capital, but it may also bring unfavorable results. If those managing the corporation do not own a large number of the shares, they may not be so interested in the welfare of the corporation and may not be so careful to manage it efficiently, as they would be if they were sole proprietors or partners.

Furthermore, those owning only a few shares may actually have no voice in the management, and their interest may not be considered. For example, suppose Ray Turner owns ten shares in a corporation having ten thousand shares. Each stockholder has one vote for each share that he owns. Mr. Turner, therefore, has ten votes in a stockholders' meeting. Since he owns only one-tenth of one per cent of the

total stock, his voting power is so small that he probably will not even attend stockholders' meetings. Even if he does, his vote may have no influence. He may see the corporation adopt polices that are unwise and that tend to decrease the value of his investment, and yet he may be helpless. Theoretically he is a part owner and has a voice in the management, but practically he may have no more power than a person who is not a stockholder.

Advantages of Each Form for Outsiders. From the point of view of those dealing with businesses, each form of organization has some advantages.

The corporation is more stable than the sole proprietorship or the partnership. A sole proprietorship is dissolved on the death of the proprietor, and a partnership is dissolved on the death or the withdrawal of a partner. A corporation, however, continues indefinitely. One can ordinarily make a long-time agreement with a well-established corporation with the assurance that the corporation will continue long enough to carry out its promises.

On the other hand, the owners of a corporation are ordinarily not responsible for an amount in excess of their investments if the corporation fails to carry out its agreements. The responsibility of a sole proprietor or a partner is unlimited. This fact may make an agreement with a sole proprietor or a partner somewhat safer, especially if the proprietor or the partners have any personal wealth.

## Section II. The Community Provides Rules for Conducting Business

Introduction. The community, through the various branches of its government, guides and aids business organizations. It sets up general rules for the conduct of business. We shall observe the nature of these rules when we study Chapter XXII. It also provides rules and regulations applying to certain businesses. Some of these rules are for the benefit of a particular class of businesses; others are for the benefit of those who use the commodities or the services of the businesses; and still others are for the benefit of both groups.

Railroads. A common example of an industry that is aided and controlled by governmental regulations is the railroad industry. The community assists railroads in obtaining the land that they need for their tracks, yards, and depots. If land cannot be obtained by a mutual agreement between a railroad and the owners of land, the community gives the railroad the right to obtain the land through court action. If the decision of the court is favorable to the railroad, the railroad must pay a reasonable amount for the land thus obtained, but the owners of the property do not have the right to refuse to sell. The power of the government to take privately owned property for necessary public or semipublic use is known as the right of eminent domain.

The community does not give to anyone who happens to ask for it, the right to obtain the property of other individuals for a railroad. Nor is a railroad that has already been established given the right in all cases to obtain additional land against the wishes of the owners. It must be shown that the giving of this right will add definitely to the general welfare. In fact, the government will not permit a new railroad line to be established unless the need for such a line can be shown. As a result our present railroad systems have the sole right to operate trains between different cities. In many instances only one railroad is permitted to serve a certain city or town.

Since the community, through its government, limits the number of railroads that can serve a particular community, it, in effect, gives all the available business to one road or, in most cases, to no more than two or three roads. It is merely fair, therefore, that the community should regulate the charges made by the rail road, in order that these charges will be reasonable.

The community is interested in seeing not only that the rates are, in general, not too high, but also that the rates charged different businesses or groups of individuals are equivalent to the rates charged other businesses or groups under similar conditions. Two factories situated about the same distance from a large city may find it necessary to ship their products to that city by railway. If one factory is given a rate that is much more favorable than that granted to the other, the business of the second factory may be handicapped very severely. In fact, all the business of an entire city may be placed under a severe handicap if the railroad rates offered to that city are not equivalent to the rates given to similarly located cities.

The prosperity of the railroads is a problem of general concern. If a railroad does not have a reasonable income, it cannot give the type of service that its patrons need. The different railroads are therefore limited in their right to reduce rates. If one railroad should attempt to gain business from another by reducing its rates, the second railroad might reduce its rates even more. Thus a ruinous competition might be started and might result in the failure of both railroads. The community, believing that such a condition would be undesirable, permi the lowering of rates only after a special commission has decided that the lower rates are justified.

Public Utilities. Public utilities are businesses that regularly supply the public with some service or commodity. Examples of public utilities are telephone and telegraph companies, and companies that provide gas, water, electricity, or transportation. Cities give special privileges to these utilities. For example, with the permission of the cities, the streets can be used by electric, telephone, and telegraph companies for their wires; by gas and water companies for their mains; and by street railways for their tracks and wires.

The right of privately owned businesses to use the streets is ordinarily limited so that no more than one company of each kind will serve a particular city or section of a city. Since the community gives the utility the right to use certain streets and keeps out all competing companies, it is only reasonable that the community should have a share in regulating the business and in controlling the methods of operation and the rates charged.

Monopolies. Whenever a business has complete control of the supply of a commodity or a service, there is said to be a monopoly. The examples given in the preceding paragraphs illustrate the general policy that, when the community aids a business in becoming a monopoly or a partial monopoly, it reserves the right to regulate the business so far as it believes that the regulation will serve the general welfare. In some instances various branches of the government have taken over different businesses, especially those that were monopolies, and are operating them without private ownership. Perhaps the movement toward public ownership, that is, ownership by the community as a whole, may increase. It is quite certain, however, that as long as monopolies or partial monopolies remain under private ownership, they will be subject to public regulation.

Foods and Drugs. The individual consumer is not in a favorable position to judge the purity of many kinds of food or to know whether he is obtaining the quantities that he is supposed to obtain. For this reason the government regulates the preparation and the distribution of numerous foods and drugs. For example, the Federal Government provides for the inspection of all meats that are prepared for interstate commerce. State and local governments may also provide for the inspection of food products.

The use of deceptive labels on packages containing foods or drugs is ordinarily forbidden. Federal and state laws specify that, under certain conditions, packages containing foods or drugs must be clearly labeled to show their contents. Not only does the community watch the quality of foods and drugs that are offered for sale, but it also regulates and controls certain weights and measures. The purpose of these rules is to prevent individuals from being led, by misleading labels or statements or by faulty scales, to believe that they are obtaining quantities greater than those that are actually being supplied to them.

In general, business men wish to sell foods and drugs that are wholesome and that are correctly labeled. It is possible, however, that, were it not for the regulation provided by the community, some unscrupulous individuals would sell inferior products at prices lower than those at which the more careful businesses could sell. Business might then be attracted away from the honest merchant to the less honest one, because the latter would be selling at lower prices. As a result, not only would the consumer receive inferior merchandise, or short weight, but also other businesses would be injured. The inspection provided by the government serves then to protect not only consumers but also business organizations.

Relations Between Employers and Employees. Accidents in which employees are injured sometimes occur in industrial and commercial establishments. Since such accidents cannot be avoided entirely, they represent a part of the cost of conducting the business. The community commonly recognizes its responsibility to those who are injured by requiring that the employers carry insurance that will provide some compensation for employees who are injured. This is a desirable rule, for it gives workers a uniform protection, regardless of the policies of the firms for which they happen to be working.

Many companies have grown so large that they employ thousands of workers. It may be impossible for the workers and the owners of the businesses to be acquainted personally and to adjust personally any differences that may arise. It is very important, however, from the point of view of the community that both the worker and the employer receive his fair share of the income from production and that the interests of both be protected. It is also important that serious disagreements be avoided, as such disagreements may lead to inefficiency in operation. If a disagreement is serious, it may result in the closing of the plant, either because the employees have quit work, that is, they have gone on a strike, or because the employer has refused to permit the employees to work, that is, he has "locked out" the employees. In either case closing the plant may result in loss for both the employer and the workers. Furthermore, the results of such disputes are unfortunate from the point of view of the entire community. They decrease the quantity of goods produced and decrease the purchasing power of many of those who otherwise would have been earning wages or deriving profits.

The community is therefore giving increasing attention to its responsibility in maintaining satisfactory relations between employers and employees. Methods to encourage the reaching of agreements that will be mutually acceptable to the management and the workers are being developed. Also, methods of settling, in a just and reasonable manner, any differences that may arise in cases in which employers and employees find that they cannot settle their problems by themselves, are considered desirable. These methods are now used to some extent and undoubtedly will be improved in the future.

Summary. The ways mentioned in this section, in which the government regulates business, are only a few of the many that might be discussed. They are sufficient, however, to illustrate that the community will regulate the operations of a business if it believes (a) that the regulation will benefit the consumers of the services or the goods of the business, (b) that the regulation will enable the business to render better service to consumers, or (c) that the regulation will be of direct benefit to those employed in the business. Consequently, the community has established rules for many types of businesses. It may be expected that the regulation of business will be expanded in the future whenever the need for additional control seems evident.

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## GETTING ALONG WITH PEOPLE

Communicating in person. In the preceding chapters of this book we have been studying some of the common methods of communication and how to communicate with others by letter and by wire. At best these methods of communication are but substitutes for the personal interview. Boys and girls, men and women will always continue to meet in their homes, their schools, their churches, their clubs and societies, and in business to talk over matters of interest to themselves and to their communities. How necessary, therefore, that every person develop within himself certain personal qualities which will help him to meet and to associate with other people.

A famous aviator reveals his secret. In a recent interview, a famous aviator told how he learned to meet and to get along with other people. He said, "I came to the conclusion that if I knew the difference between the right way to do a thing and the wrong way to do it, it was up to me to train myself to do the right thing at all times. So I drew up a list of character factors. At night I would read off my list and those which I had fulfilled satisfactorily during that day, I would mark with a red cross. But those character factors which I had actually violated each day I would mark with a black cross. I began to check myself from day to day and to compare the reds and blacks from month to month and year to year. I was glad to notice an improvement as I grew older."

Here are some of the "character factors" in the list:

| | | | | |
|---|---|---|---|---|
| Ambition | Economy | Initiative | Pleasant voice | Self-control |
| Clean body | Energy | Judgment | Punctuality | Self-confidence |
| Clean speech | Enthusiasm | Loyalty | Patience | Sense of humor |
| Clean thought | Faith | Modesty | Politeness | Sympathy |
| Clean conduct | Gracefulness | No faultfinding | Reverence | Sincerity |
| Cheerfulness | Honesty | No talking about others | Recreation-"Manful, not sinful" | Tact |
| Courage | Hopefulness | Optimism | Self-esteem | Unselfishness |
| Courtesy | Industry | Perseverance | | |

Personality. The sum of these personal qualities (or "character factors"), is the measure of what we call personality. Personality is hard to define, but we feel its quality in everyone we meet. Without our knowledge, it determines our attitude toward different people. In a similar way it determines the attitude of others toward us. They like us or they dislike us, and their likes or dislikes have much to do with our personal success.

Personality, however, is not something we are born with, like blue eyes. It can be cultivated. Moreover, it is an expression of what we are--the sum total of our qualities of mind and body which makes each one of us different from another. Genuineness, sincerity, honesty, willingness to work, or the opposites of these qualities will soon show in that indefinite thing that we call personality.

Tact. There are several qualities that enter into personality. One of the most important qualities of the successful person is tact. Tact has been defined as the quality of doing the right thing in the right way. It means that the tactful person keeps his temper. Nearly everyone finds times when he would like to accuse some other person of foolishness, injustice, downright meanness, or dishonesty. On rare occasions this is necessary. In at least ninety-nine cases out of a hundred, however, there is a better way. That better way is based on genuine kindliness of spirit. One who knows that several different opinions are possible on nearly every question is not

absolutely sure that his own is the only right one. Again, the person whose one purpose is to get the job well done will not willingly offend another whose cooperation is necessary to the best result.

Essentially, tact comes from an appreciation of the feelings of other people. One who habitually tries to put himself in the other fellow's place is pretty sure to develop tact. Modern business has made wonderful advancement in system and in all forms of organization. Inventive geniuses have produced machines that almost think. Much less progress has been made in perfecting the human relationship necessary to successful management of the systems and the machines and the world is full of otherwise competent people who fail because of lack of tact. Genuine interest in others and in their welfare, willingness to give credit for good work, and the kindliness that tempers a just criticism with an encouraging smile are qualities rarely lacking in a successful worker.

Good manners. Good manners are merely ways of doing things which make other people feel comfortable and at ease. Politeness, courtesy--other words for good manners--are based on thoughtfulness of the rights and feelings of others. They are to the personality what oil is to the machine--a means of keeping it running smoothly without friction. They are closely related to tact, but they include observance of some definite rules that make it easier for people to get along with one another.

Here are some bad manners that are like squeaky hinges needing oil:

Interrupting other people
Slamming doors
Walking in front of other people unnecessarily
Remaining seated when older people are standing
Whispering in company
Eating, chewing gum, powdering the nose, manicuring nails in public

Good humor. Good humor is one of the important elements of tact. The grouch who is placed over others is seldom successful. The disagreeable person is always disliked by his equals. Sometimes a grouch delights in sarcasm. Such a person is always hated. The one who is always blaming others invites the severest criticism for his own errors. Think of the people you like and see if the tactful, good-humored kindly person is not always the one for whom you will work hardest.

Good health, cheerfulness, enthusiasm. The abundance of energy and vigor which is needed for a happy and active life is the result of good health, cheerfulness, and enthusiasm. Good health depends very largely on the following simple rules:

Exercise for a short period in the open air every day.
Work and sleep in well-ventilated rooms.
Avoid drafts.
Choose simple, wholesome food and chew it thoroughly.
Eat sparingly of meat and rich pastries.
Wear clothing suitable to weather and season.
Remove damp clothing as soon as possible.
Get at least eight hours sleep out of every twenty-four.
Be cheerful and enthusiastic. Acquire a hobby.

Cheerfulness and enthusiasm not only help to keep people well, they also help to make them good workers. So convinced of this fact was a Chicago store that it had placards in every section which read, "Civility and smiles cost nothing. We have a large supply of both."

Command of English. Nothing is more important than a fine command of English. Nearly everyone must communicate in both oral and written form. Even a voice over the telephone gives an instant picture of the speaker. One's speech is the clothing of his mind and thought. Bad grammar, wrong pronunciation, poor enunciation, a loud and rasping voice are the ill-fitting coat, the baggy trousers, the torn, dirty dress, the muddy shoes of the mental wardrobe. Here are some particulary ragged and ill-fitting or worn-out articles from the wardrobe of speech:

| | | |
|---|---|---|
| I haff tuh | I'm gonna seer | a swell time |
| Gimme a chanct | Werja go? | he's so dumb |
| Lemme see | Hooja gowith? | It's grand |
| Didja see 'im? | Nona that stuff | I left him go |

Have you not often met people whose speech was simply delightful to hear? They pronounced their words well--did not clip their ings and eds, used correct grammar, and had command of words that exactly fitted their thought. Moreover, they did not speak all in one tone. Their voices were not loud and harsh, but rose and fell in a way that made it easy to listen to them.

Back of this correctness of speech was a command of their subject. They knew. And their knowledge came from the interest that they had put into their work. Their pride in doing things well had brought a joy of achievement that had made them worthwhile people.

Cleanliness and carriage. Clean skin, clean teeth, clean nails, clean clothes, and clean and well-brushed hair are qualities which a person is expected to have, and which help him in his work and in his association with other people. The boy or the girl who is clean, neat, and orderly in his personal appearance usually shows similar qualities in his school work and in his occupation. To this boy or girl, cleanliness means much more than personal appearance. It also means clean thoughts, clean speech, and clean conduct.

Gracefulness shows in the way a person carries his body. It is the result of good posture. We have a natural feeling of confidence in the man who carries himself well, who walks erect, with head up, chin in, loosely swinging arms, and who meets another's look with direct and open glance. He shows poise, self-respect, and courage in his whole bearing. We have little confidence, however, in the slouchy person. We are likely to think that his slouchy body houses a slouchy mind and has a slouchy way of doing its work.

Persistence. Do you think Thomas A. Edison enjoyed working twenty hours a day and sleeping on a table in his laboratory? By this hard work he gave the world the incandescent light, the talking machine, the motion picture, and over thirteen hundred other inventions that make life infinitely easier and more interesting for the whole civilized world. Think about the lives of the most successful people you know, and see if you do not decide that they are having a perfectly delightful time just doing a thoroughly good job.

One of the first qualities necessary for success in a business, a profession--in any kind of the work of the world--is persistence, stick-to-it-ive-ness. The successful person goes at his job with a determination to do it and do it well. He is not satisfied with "just getting by." He does the job not for a reward so much as for the joy of doing it well.

Honesty. The worthwhile man is honest with his employer, honest with his fellow workers, honest with the people who will use the product of his work, because he is honest with himself. His is an honesty that would prefer a low grade in school to a

high one gained by cheating in an examination. This is a quality that keeps an employee on the job and working his best when the boss is away. The honest worker knows that when he steals an hour of working time he is stealing the money he is paid. He knows that a badly written address must be verified or corrected; that a mistake in addition may require hours for correction; that a falsehood will put someone in the wrong light--probably himself. He knows that if he "gets by" for the time being with a mistake, a piece of slipshod work, or a lie, he is building mistakes, failures, and lies into his own character. These, he knows, will in time show on his face and in his manners. In the long run he will become one of those whom no one will trust.

Cooperation. The successful person will work with others. He will be charitable even if he has to correct their mistakes, because he knows that he sometimes makes mistakes himself. But he will keep his mind on the result--a thoroughly good job which must come through the cooperative effort of many people. A chain is no stronger than its weakest link. While one is making sure that the particular link he is forging will stand the strain, he is interested in the whole chain, and so he strives to strengthen any weak link made by another.

Resourcefulness, initative, self-reliance. It goes without saying that the one who is interested in his job will give it his best thought. He will not say, "that is what the boss is paid to do." The boss is boss probably because he can think. Nearly everyone in the business world has a boss--even up to the president of a large corporation.

Suppose we do a little problem in arithmetic. A boy takes a position for which he is paid $15 a week or thirty-five cents an hour. His boss gets $75 a week or $1.55 an hour. Part of his work is to see that the boy does his tasks well. If he has to spend five hours a week looking after the boy, the young worker is costing the firm $15 plus $7.75 or $22.75 a week. If the boy learns to do his job so well that the boss can forget about him, the firm can save some money by paying the learner $20 a week. Let him save some money by paying the learner $20 a week. Let him apply this principle steadily, and he will soon be getting not $20 but much more because he is really worth the money.

All this will mean that this young man is resourceful; he is so alert that he sees new and better ways of getting results. In other words he is developing initiative--power of originating better ways of getting results. Success will bring self-reliance, and self-reliance means thinking--hard thinking about daily problems that we should solve. What many young people fail to appreciate is that this thinking brings genuine enjoyment. Doubtless men like Edison and Lindbergh got more real joy out of life than the majority of men because of this delight in finding new ways. They have one of the greatest joys in life--the joy of achievement.

Loyalty. One who has these qualities of perseverance, honesty, cooperation, tact, good humor, initiative, resourcefulness, and self-reliance can hardly fail to be loyal to his friends and to his daily tasks, because he is loyal to himself. If he is a stenographer, he will never reveal anything in his employer's correspondence. If he is asked to work overtime, he does not ask whether he is to be paid for it. If he makes a mistake, he owns up frankly and tries to correct the error. In the long run, a person of this kind will in his promotions be paid many times for the overtime. What is more important, he will be rewarded by knowing in his own heart that he is what he appears to be.

All these qualities may seem a bit indefinite, but they are, nevertheless, the most real and lasting elements of success. There are a few other qualities that are easily seen by everyone.

Promptness, accuracy, and system. Any worker can be on time. The one who makes you wait steals your time and keeps you from doing your work. He throws your whole program out of order. In nearly every case the person who is habitually late is also unreliable in many other ways. As a rule, accuracy goes along with promptness. There are certain things that one in any position is supposed to know--not guess at. For example a salesman is supposed to know his goods and their uses. Others will base their plans or decisions on what the salesman says--until they find that they cannot depend on him. Then--well, he will probably be looking for another job, so he won't matter as far as the buyers are concerned.

Anyone can learn to be systematic. One whose desk looks like "A cross section of chaos," will spend literally hours fruitlessly hunting for things he should be able to find instantly. His work will be slowed down. Worse still, he will be getting a bad habit that will make him worth much less to his employer--and himself.

Ambition. This is an eager desire to get ahead in the world, to better one's position in life, to rise to positions of greater responsibility and trust, and to make more money. It is perfectly natural to be ambitious. Ambitions may never be realized, however, if the boy or the girl leaves school too young, merely to get a job and earn some money. The lack of proper education and training is a serious handicap in later life.

Aptitudes. "She embroiders beautifully." "He is continually making something." "Her great delight is in preparing and cooking tempting dishes." "You never see him without a book in his hand." These expressions, and many others of a similar nature, are heard frequently. Each applies to some particular individual who seems to have a natural tendency toward some particular line of work. This capacity or fitness for, this leaning toward, and this readiness in learning a particular job are summed up in the terms ability and interest, which are otherwise known as aptitude.

Thomas A. Edison said; "Every man has some forte, something he can do better than he can do anything else. Many men, however, never find the job they are fitted for. And often this is because they do not think enough. Too many men drift lazily into any job, suited or unsuited for them, and when they do not get along very well they blame everybody and everything except themselves."

Bion J. Arnold, one of America's most famous consulting engineers, said: "My father wanted me to become a lawyer like himself. Most of the neighbors thought it peculiar for anybody to be interested in engines. But I wanted to construct things that would go, and I wanted to make them go. I hated everything and anything that stood in my way. I went miles and hours out of my way to try to learn what most people seemed to think I ought not to care about." Mr. Arnold early discovered his natural aptitudes and persisted, despite all obstacles, in training himself in his chosen vocation.

Rating your personal qualities. Someone has classified the personal qualities about which you have been reading, and some other personal qualities as well, into three groups and has arranged them in a chart such as you see farther on in this book.

Watch yourself Did you ever read the little poem "Watch Yourself Go By."

"Just stand aside and watch yourself go by;
Think of yourself as "he," instead of "I."
Note, closely as in other men you note,
The bag-kneed trousers and the seedy coat.
Pick flaws, find fault; forget the man is you,
And strive to make your estimate ring true.
Confront yourself and look you in the eye--
Just stand aside and watch yourself go by."

# LOOKING AHEAD

Choosing a vocation. Many young people choose their vocations like the blindfolded player choosing his partner. To the first job "caught" they say, "I'll choose you." Often these young people are not in a position to make a better choice when they enter business. They are blindfolded by lack of education, lack of special training, and lack of knowledge of the business world. They are indeed fortunate if they find work for which they are fitted and which they enjoy.

It is to keep young people from entering the business world blindfolded that business courses are being offered in our public schools, our private business schools and our colleges. The pupils in these courses not only learn much useful information about the business of the nation, but they also get practice and experience in the duties of many different occupations. Thus, by actual experiment, they find which kind of work interests them most, which they like best, and which they are best fitted for.

A first course in business. Your study of INTRODUCTION TO BUSINESS has taught you something about the value of business to a community, about the organization of business and about the amazing variety of business enterprises and activities. You have also learned something about the duties of the position which are open to junior workers. If you should have to leave school now and go to work, you would not be unprepared for a position on the junior level of service such as messenger, mail clerk, or junior file clerk.

Go on with your schooling. If you can manage to stay in school until you graduate from senior high school, however, you will not only be much better prepared for these junior positions, but you will also be ready for beginners' positions on the senior level of service. You will be well equipped for service as a stenographer, a bookkeeper, a retail sales person, or a general clerical worker. By taking advanced business courses in a school of business of college rank, you may prepare yourself for still better positions. Yoummay enter the junior executive level as private secretary, correspondent, junior accountant, auditor, or assistant to the advertising manager, to the sales manager, to the purchasing agent, or to some other executive.

These higher business positions are usually open only to people with education and training. While they require more training and involve more responsibility than do the junior positions they also pay better salaries. A good education and a good salary usually go hand in hand. In general, college graduates earn more than high-school graduates. High-school graduates, in turn, earn more than the untrained workers who leave school and go to work when they are only sixteen to eighteen years old. A good education is the best business investment you can make.

Business courses in senior high school. Let us suppose that you are going on in high school and are planning your course of study. You learn that there are several business courses offered. Which shall you choose? Frequently the courses are planned around the different business services which are common to all kinds of business agencies. If you are interested in communication, you probably want to take the stenographic course, which prepares persons to handle business communications. The merchandising course will probably be your choice if you are interested in retail selling or other kinds of store work. If you are most interested in finance and business accounts, you may elect the bookkeeping course. If you have a liking for general office work, you will probably choose the general clerical or office practice course. In order to choose wisely, however, you should know what these courses require and what they include, as well as what positions they prepare for. The following paragraphs, will, therefore, describe briefly the four main business courses offered in the larger high schools and schools of business.

The stenographic course. This course aims to prepare the student to handle all kinds of business communications, by giving him a thorough knowledge of English and a mastery of typewriting and shorthand.

Shorthand is really a language with an alphabet of symbols which stand for different word sounds. A word written in shorthand is so much shorter than the same word written as you would write it, that the experienced stenographer can easily write a conversation while it is going on. Skilled stenographers can write two hundred or more words a minute and transcribe their notes rapidly on the typewriter.

In addition to writing shorthand rapidly, the stenographer must be able to read what he has written faster than you are reading this page, and must be able to transcribe his notes on a typewriter quickly and accurately. He must also know how to spell and punctuate and to write sentences that are gramatically correct, well worded, and well arranged. A pupil who has poor grades in English, or who finds languages difficult, may also have difficulty in learning shorthand, in making perfect transcript on the typewriter. This pupil should seek the advice of his school counselor before he chooses the stenographic course.

Although there are more young women than young men in stenographic work, there are many opportunities in business for the young man who has a good general education and a thorough knowledge of shorthand and typewriting. Thousands of men in executive business positions in our country today began work as stenographers. For the stenographer who develops high speed in the taking of dictation, there are well-paid positions in the courts as court reporters. The working week of the stenographer is usually forty-four hours. The salary paid depends on the position and on the experience and skill of the stenographer. It varies from about $16 a week for the beginner, to $100 a week or more for the court reporter.

Merchandising or retail distribution course. This course is the one to be elected by pupils who are interested in marketing or retail selling. The course is planned to give the student an understanding of the principles which underlie all store merchandising. It includes a study of the problems of production and distribution of goods, of transportation and marketing, or retail selling and store organization. It may include special work in advertising and a study of textiles, color, and design. The principles of salesmanship and storeselling procedure are studied in great detail. This course also includes actual store practice in receiving storing and marking merchandise, and in retail selling.

There are more people in the United States engaged in retail selling than in any other single business occupation. Both men and women are needed, and both find many opportunities for advancement. The young retail clerk may become a salesman or a traveling salesman, positions on the senior level, or he may become assistant sales manager and, later, sales manager, positions on the executive level. In a department store he may become a buyer. The working week of the retail sales person varies with the kind of store in which he is working. It rarely however is less than forty-four hours a week. The salary ranges from about $16 a week for the beginning retail cleark to $25,000 a year or more for the sales manager of a large corporation. Salaries in retail selling, however, depend largely on the quantity of goods sold by the sales person. He usually receives a small regular salary and a commission or bons on total sales above a certain fixed amount.

The bookkeeping course. Like the stenographic and merchandising courses, the bookkeeping course prepares pupils for actual positions in the business world. Its graduates enter the financial division of some business as bookkeepers, ledger clerks,

or any of the other positions listed in Figures 272 and 279. The training in arithmetic and in the keeping of accounts, which the student of bookkeeping receives, is of value to the housekeeper, the lawyer, the physician, and the salesman, as well as the employee in the accounting department of a business. A thorough knowledge of bookkeeping is also part of the training which every person must have who wishes to enter the field of accounting or to qualify for the degree of certified public accountant.

Positions which require some bookkeeping duties are open to young women and young men alike. The salaries range from about $16 a week for beginners to$10,000 a year or more for the skilled certified public accountant. The working week of the bookkeeper is about forty-four hours.

General clerical or office practice course. The general clerical course prepares pupils for the various clerical positions listed in Figure 272 and for many other office positions. It is particularly useful to the boy or girl who has no particular mathematical or language ability or who does not enjoy retail selling, but who wishes to enter business as an office worker. The course provides a broad general business training, and allows the student to specialize in the kind of clerical work which interests him most. It includes training in filing, in typewriting, in elementary bookkeeping, in telephone switchboard operation, and in office-machine operation.The pupil is given the opportunity to learn the operation of the calculating machine, the billing machine, the bookkeeping machine, or any one of several of the other kinds of office appliances which are found in all modern business offices.

There are more positions available for the trained general clerk, whether young man or young woman, than for the trained stenographer or the trained bookkeeper. The working week is the usual business week, forty-four hours, and the salaries range from about $16 per week for beginners to $35 for experienced senior workers. Advancement is open to department-head positions within the office organization, which pay higher salaries.

## THRIFT

What is thrift? Three boys start on a five-day hike in the mountains. There is no place on the route where they can buy food, so each must carry provisions for the entire trip.

Tramping in the open air makes them hungry. At the end of three days, Fred has eaten all his food; John and Will have been just as hungry as Fred but they have kept in mind the needs of the last two days, so they have enough for themselves. They were thrifty; Fred was not.

A boy with twenty-five cents in his pocket is seized with a perfectly natural desire for a dish of ice cream. It happens that he is saving to buy a bicycle. He thinks of the ice cream which would be delightful for about five minutes; then he thinks of the bicycle which would keep on giving him pleasure for many hours. One is here and now; the other is a long time away.

Any boy or girl can make substitutions in this picture. Sometimes candy, a movie, or a party will take the place of ice cream; a summer vacation, a violin, music lessons will represent the bicycle. Always the question will be--shall I enjoy something now or shall I keep the money toward a satisfaction in the future?

No one would be foolish enough to say that one should always decide to keep the money for the delayed use. To do this always would make one a miser. Moreover, it is only fair for boys and girls to contribute to the family expenses when it is necessary. Thrift requires wise spending as well as wise saving. But common sense dictates that there must be careful weighing of values between the present and the deferred satisfaction--certainly the easy decision in favor of the present joy is unwise. The success of any person depends on how well he manages his resources--how thrifty he is with his time, energy, material things, and money.

The results of thrift. Thrift was important long before anyone heard of money, banks, and schools. History shows that nations have gradually progressed from a savage way of living to our modern civilization as a result of being thrifty in the use of their resources. They have saved part of their resources for later use. They have conserved their forests and other natural resources. If our ancestors had not made a wise use of time, energy, and material things, we should have no bridges, no good roads, no canals, no music, no books. Modern inventions, such as the telephone, the electric washing machine, the radio, and automobile, and the airplane would never have been developed. We should still be living in caves and huts and traveling on foot or on the backs of animals.

Thrift with time. "I should like to, but I haven't time." You have often heard this sentence and probably have used it many times. Unlike money, every living being has exactly the same amount of time--twenty-four hours a day. Some of it should be spent just for the fun of the moment. We think of games, entertainments, parties, and sports of all kinds as the dish of ice cream. Like the ice cream, they are good in their places. But thrift in time requires that many hours of every day should lay up something for future use in money or other property or in the power of knowledge and skill that comes from school or other kinds of work.

Doctors, lawyers, business men, and most busy people have found that they can use their time to better advantage if they plan its use carefully in advance. They divide the day into definite periods and prepare a time schedule which includes everything that must be done.

Boys and girls in school find that, like the business or professional man, they too can accomplish more if they prepare a time schedule. Such a time schedule would allow time for school, for meals, for home work, for chores at home, for recreation, for sleep. A pupil's daily roster or program provides a time schedule for classroom work, study periods, lunch, and recreation.

Let us think how our time could be used to better advantage. What improvements can you suggest in the use of your time? A schedule of time might be called a budget. We often hear of the budget of a city or a state. This means a plan for the expenditures of the money necessary to run the government. Thrifty people make budgets or plans for the use of their earnings. Fred would have been wiser if he had made a budget of his food for the five days of his trip. One who is thrifty with his time makes a budget which provides for the various things he has to do.

Thrift in energy. For a given day a person has a certain amount of energy. To a certain extent he may draw on the reserve of energy needed for the next day or the next week but in the long run he must pay back this energy or nature will make him pay the penalty in sickness. In the next paragraph are a few sugestions for a budget in energy.

Much time and effort can be saved in the preparation of lessons by following a plan like this: 1. Have a comfortable place to work where there will be no interruptions. 2. Collect all necessary materials before beginning to work. 3. Have a definite plan for study. For the most difficult subject, give the time when your energy is greatest. It is probably wisest to solve the hardest problems first and do the easier ones when you have less energy to spend. 4. Keep in mind the aims of the lesson or the finished product you are working on and plan the work in a way that is most effective. For example, some people read an assignment through quickly once and then read it carefully a second time. Others make an outline or write questions on the assignment. The outline is doubtless one of the best methods. One should, however, try various plans and test the results. 5. Keep a record of the time spent on assigned work, and change your methods if you are spending too much time and getting poor results.

Recreation. Thrift in time and energy demand a proper amount of recreation. Not only do we need exercise, but we need to have fun. This may take many different forms such as all kinds of sports and games, dancing, music, reading, visiting with friends, trips--you can fill out the list yourself. A life made up only of recreation, however, is not only useless, but a bore to the one trying to live such a life and to those associating with such a person. It is like a steady diet of desserts. If you doubt this, notice in the newspapers the stories of the people who try to live lives of nothing but recreation. Fortunately nearly everyone has to work for a living. The vast majority of wealthy people find some worthwhile work. Many rich men work harder than any of their employees. They find that their chief joy in life is the joy of achievement. When we have done a good day's or week's work, a movie, a game, an evening with friends, a week-end trip, is the dessert after a good dinner.

Health and other personal qualities. We can do our best work only when we have good health. Every period of sickness and ill health means loss of time from work or loss in quality of work and this results in loss of money. Insurance companies say that an average of 3,000,000 people in the United States are ill all the time. They also say that 48% of this sickness is preventable.

We can keep in good health by following a few simple health rules. Turn back to page 88 and read again the rules for health that are given there. Are you observing those rules? Are you improving your other personal qualities?

If you do become ill, you can often shorten the period of illness by beginning treatment as soon as symptoms are discovered. A cold that is taken care of at once can often be cured in a day or two, while, if it is allowed to go without treatment, it may last for weeks.

Thrift with property. Proper care in the use of property is as important as it is in the use of money. Many people leave food to spoil or throw away wholesome leftovers; they discard clothing that could be cleaned, altered, or mended to advantage; they purchase flashy goods that are quickly thrown aside. Others are particularly wasteful and careless about public property. School supplies and books that are free to the pupils must be paid for by taxpayers, who of course are the parents of these same boys and girls. Public parks and buildings are not only valuable in themselves, but they require care which costs the taxpayers money.

Thrift with money. The progress of a country depends on how well its people manage their time, energy, and material resources. The individual's success also depends largely upon the thrifty use of his resources in school, home, social, and business affairs. But as the value of material resources and much of the value of our time and energy is measured in money, a study of thrift must be largely a study of the careful handling of money. Thrift with money really involves four things:

Working and earning efficiently; spending money wisely; systematically saving a part of what we earn; and investing money securely. These investments may take various forms, such as savings bank deposits, life insurance policies, shares in a building and loan association or postal savings certificates.

"Waste products." Business men and scientists have long realized that waste reduces profits and cripples industry. By changing this waste into useful products, many businesses have built new industries and added to the nation's wealth. Gasoline was once a waste product which no one knew how to use. Coal gas, which is produced when coke is made from coal, was formerly allowed to escape as worthless. It is now changed into ammonia and tar, and finally into dyes, perfumes, and many other useful products. Soap, glue, oils, fertilizers, and strings for musical instruments are now made from what were formerly the "waste products" of the meat packing industry. Indeed, it has often been said that the packers utilize everything about a hog but his squeal. This means that they can sell pork cheaper than they otherwise could. This is an illustration of the fundamental principle of interdependence. Not only does the prosperity of every class of people depend on the prosperity of every other class, but the prosperity of every nation depends on the prosperity of every other nation. The terrible sufferings of the financial depression that began in 1929 have made people understand this principle as they never did before.

Working and earning efficiently. The things we need and want cost money, and for most of us the only way to get money is to earn it. Even before we are through school, we may earn money to supply some of our needs. By working after school, on Saturdays, and in summer holidays, many boys and girls have earned enough to pay for most of a high school and college education. One boy works in a grocery store on Saturdays and earns enough to pay for all his clothes. Another boy, by selling newspapers and magazines, earns enough to finish his high school course. A girl pays for piano lessons by working in a tea room during evening rush hours. Another works in a department store as extra clerk on Saturdays. Another is mother's helper in her after school hours.

Spending wisely. For most of us, it is easier to earn money than it is to spend it wisely. There are so many things we would like to own, that spending our money is a constant temptation. Most people find, however, that if they plan how to use their money before they spend it, they are not so likely to spend more than they can afford. This may be called wise spending and intelligent buying.

Here are a few questions that will help one to decide problems of buying: Do I need this article? Can I afford it? Can I do without it? Is the quality good? Is the price reasonable? Must I deprive myself of something I need more in order to buy it?

Thrift in giving. When John and Will found that Fred had eaten all his food, they probably shared their own provisions with him. Fred lost something in the respect of his companions. He was a poor sport. But we should probably feel that John and Will were stingy if they had not helped him out.

There are, however, thousands of cases that appeal to us more strongly than Fred's. In the great financial depression that began in the fall of 1929, literally hundreds of thousands of people were thrown out of work. Many of them had saved enough so that they needed no outside help. Many others would have starved if those more fortunate had not come to their rescue.

Moreover, there are many agencies for human better ment that are always with us and rightfully asking our aid. The best in human life centers around the various religious organizations. Who would want to live in a community where religion is receiving no thought or attention. These organizations, however, cannot live without money. Hospitals, civic organizations, community chests, and other good causes have claims on each of us. The good citizen feels that it is a privilege to have a share in helping those institutions and organizations that are working for human betterment. Such people have only contempt for others who are so selfish that they refuse to share their good fortune with others who are less fortunate.

Keeping a record of money spent. In addition to buying intelligently, the wise spender keeps a record of his money--his income and his expenditures. This is known as a cash record and is explained and illustrated in the chapter on budgeting. Careful examination of such a record will show where too much or too little has been spent and will help in making a budget for future use of money.

Saving money. Some young people do not understand why they should save money. "We are young and strong," they say. "Old age is a long way off. Besides we may not live to be old. Why shouldn't we spend our money now and have a good time while we can still enjoy it."

There are several reasons for saving a part of our earnings. With accumulated savings we may buy comforts and luxuries which we could not otherwise afford--a violin, a radio, an automobile. Savings may be used to take advantage of exceptional opportunities, such as a chance to buy property at a very low cost, or to go on a trip with a friend. Savings may also be invested to earn more money. And finally, savings protect us against a possible loss of income. People who have no savings must go into debt when these misfortunes come, or depend on their friends to help them out. And when they are old, men and women without savings must depend on others for their support. James J. Hill, the poor messenger boy who became a wealthy railroad director, said that the ability to save money could be taken as a sure test of successful living. "If you want to know whether you are destined to be a success or a failure in life, you can easily find out. The test is simple and infallible--are you able to save money?"

Saving systematically. The first dollar is always the easiest to spend. With a little will power or determination, it is just as easy to save a part of the first dollar. Regular saving depends on the ability to save a portion of that first dollar and of succeeding dollars.

There is a difference between merely saving and saving systematically. We save very little if we put a part of a dollar in the bank only when we happen to think about saving or when we happen to have a dollar on hand. Systematic saving means saving regularly a certain amount of our daily, weekly, or monthly income. It is much easier to save systematically than it is to try to save a few dollars whenever we have extra money. In fact, most people find that unless they save systematically, they cannot save at all. Their savings grow only when they save regularly and put a definite amount in the savings bank every week or every month.

Keeping a budget. In addition to saving systematically, a thrifty person estimates his income and expenditures for a given period. This is known as preparing a budget and is explained and illustrated in the ch apter on budgets.

Investing securely. Institutions of many kinds exist to help one to invest his savings; The Post Office Department with its postal savings stamps, certificates and bonds; school banks; building and loan associations; life insurance companies, and

our efficient banks with their commercial, trust, and savings departments. Secure investing in such institutions will be explained in the chapters on Investments, Insurance and Banking.

## BUDGETS AND RECORDS

The need for a budget. A builder who could not estimate in advance the cost of a house, but agreed to build it as economically as possible, and to calculate the costs when he had finished, would be considered a pretty poor business man. But isn't that exactly what many people are doing when they spend as fast as they earn, without estimating expenses and carefully recording expenditures? Not so, however, the thrifty schoolboy who lives by a budget. He estimates his weekly earnings, distributes the money among his needs as he has classified them under various headings of his plan and keeps within his estimates.

The easiest way to spend wisely and to save systematically is to follow a budget and keep a cash record of income and expenditures. A budget is a plan for saving and spending money, based on the amount of income which is expected to be received. The United States Government, as well as city and state governments, budgets income and expenditures. Business men find that budgeting the expenses of shop and factory is necessary to the carrying on of a successful business. Families and individuals also find budgeting the best way to keep their expenditures within their incomes.

Proportioning the income. If a budget is to be useful, it must provide for all necessary expenses. The proportion of the total income which should be allowed for each expense, however, depends upon the circumstances of the individual making the budget. Some have a larger income than others, and can afford to save more and spend more. Some have no car fare to pay. Some must buy small articles of clothing, such as stockings, socks and collars, out of their allowance. Each person must make a budget for himself, proportioning his income according to his own needs.

A United States Government publication suggests that a thrifty person will spend 50 per cent of his income for living expenses, 10 per cent for education or advancement, 10 per cent for recreation, 10 per cent for church and charity, and 20 per cent for savings. Do you think this is a wise plan for using an income?

How do you proportion your money? What per cent of each dollar of your earnings or allowance do you save? What per cent do you spend for living expenses? What per cent do you spend for recreation? for education? for giving?

John prepares his budget. John decided at the beginning of the week to keep a record of the money which he earned and spent. His father showed him how to make a budget. Such items as food, lodging, and clothing were omitted from this budget. John's parents paid for these. How much do you estimate you would earn during the week? How much do you estimate you would spend? What amount would you hope to save?

John lives within his budget. In order to keep within his budget and to save money as he had planned, John kept an account of his actual earnings and expenses. This account is called a simple cash record. In the first two columns the date of the day, month, and year are written. In the third column the source of the money received and the purpose for which it is paid out are explained. In the cash columns, dollar amounts are separated from cent amounts by a vertical line, so dollar marks and cent signs are not needed.

The classified cash record. John might use a classified cash record which is combined with his budget and has the items of "cash received" and "cash paid out" classified in separate columns. From this cash record, John can tell quickly how

much he is spending for lunch, car fare, or any other item, and whether his expenses for any particular item are exceeding his estimates.

Cash records of a club or society. At school John is treasurer of his school student association. This is one of the clubs in his high school. The club receives dues from its members and earns money through the sale of club pins, the giving of entertainments and benefits, and in other ways. It spends money for different club and school activities. John keeps a record of the club's receipts and expenditures. All societies, clubs, and business and social organizations keep a record of cash receipts and cash payments, much like the record which John kept for his club.

Statement of income and expenditures. The treasurer of a club or society is required at least once each year to prepare a statement of the club's income and expenditures. This statement together with bills, receipts, canceled checks, and bank statements, are examined (audited) by a committee of the club. In order that the checking of the records by the committee may be done quickly and accurately, the treasurer usually prepares a statement with the items of income and outgo classified.

John checks his cash record. To check the accuracy of his cash record, John finds the amount of difference between the totals of the "money received" column and the "money paid" column. Then he counts the cash which he has on hand. The amount of cash on hand should equal the difference between the "received" and "paid" columns. If the two amounts are equal, the account is said to balance. If they are not equal, John has made a mistake either in adding the columns and finding their difference or in recording the actual amounts spent and received.

John pencil-foots the money columns. After he has added the columns, John writes the total of each column in small pencil figures beneath the last amount. This is called pencil-footing. On a separate piece of paper, or in the explanation column, he substracts the total of money paid from the total of money received. The difference is the amount necessary to make the smaller total equal or balance the larger total. Hence, it is called the balance.

John balances his cash record. At the end of every month, John balances his cash record as follows:

1. He pencil-foots the money columns.
2. He writes Balance in the "paid out" column; and after it, the difference between the amount received and the amount paid out. John might use red ink in order that the balance might be distinguished quickly from the other items. (The use of red ink is customary, but not absolutely necessary)
3. He draws a single line across the two money columns under the word Balance
4. He totals each column and enters the amount received and the amount paid out. (Notice that the totals are equal)
5. He draws double-ruled lines below the totals and across all columns except the "explanation" columns.
6. He enters the balance on hand in the "money received" column.

The family budget. Every family has certain needs which must be met by the family income. Those needs are shelter, food, clothing, and such operating expenses as heat, light, and telephone. In addition, every family budget should make provision for savings and for recreation and health. When the family income is small, most of it must be used for the actual needs, and only a small amount is left for savings and advancement. When the income is larger, the proportions for savings and advancement increase. A family with a small income may have to budget 60 per

cent for food and shelter, while a family with a larger income may need to budget only 40 per cent or 50 per cent for those items.

How to Keep a Family Budget. There are several methods of keeping a family budget. Many families use an account book. This may be either a specially printed budget book or any good-sized notebook, ruled with pen or pencil into the proper number of columns for the different entries. Some families use a system of envelope labeled "groceries," "milk," "rent," or "car fare," etc. When the pay is received each envelope is given its budgeted amount of money. The different expenses are then paid for as they arise and out of the proper envelope. A card index may also be used.

The business budget. Like the thrifty person, the thrifty and successful business budgets its income and expenses. A business has so many expenses and often so many sources of income that without a definite plan it could not be operated. Here are some of the things a business must plan for carefully in order to balance its income and expenses and make a profit.

1. Saving money and labor by using modern machinery and up-to-date methods.
2. Defining and mapping out the duties of each worker, and instructing and supervising the employees at work.
3. Buying tools and raw materials in large quantities, in order to take advantage of wholesale prices and carload shipping rates.
4. Making necessary repairs promptly.
5. Allowing for wear and tear on machines by setting aside money regularly to make the necessary replacements.
6. Keeping a record of the cost of operating each department.
7. Comparing costs with profits to learn what part of the business is most profitable and to increase the profits.
8. Determining the selling price of articles by adding the necessary per cent of profit to the cost.
9. Saving a share of the profits (which may be withdrawn every month or year by the owners) for improvements, depreciation and future expenses and losses.
10. Preventing waste by paying attention to details: verifying all orders for materials bought and sold, storing articles so as to prevent damage and theft, and requiring records and receipts for all money paid out or received.

Budgeting and the Social Security Act. Very few budget makers, whether they be individuals, heads of families, or business or other organizations, provide adequately for the care of the worker in his old age or during periods of unemployment. Beginning November 24, 1936, however, the United States Government set up a social security fund which will give about twenty-six million working people in our country something to live on when they are old and have stopped working. This law, which also gives other benefits, such as aid to the blind, to dependent and crippled children, and to the unemployed, was passed in 1935 and is called the Social Security Act.

What the Social Security Act means to the worker. This act means that all workers, officers as well as employees, in factories, shops, mines, stores, offices or in almost any other kind of business or industry except farm labor, domestic workers in private homes, Government and railroad employees and a few other workers will be earning benefits that will come to them later. From the time these employees are sixty-five years old or more, and stop working, they will get a Government check

every month for life, provided they have worked one or more in each of any five years after 1936 and have earned during that time a total of $2000 or more.

How much the employee will get when he is sixty-five years old will depend entirely on how much he can earn in wages from his business or industrial employment between January 1, 1937 and his sixty-fifty birthday. A man or woman who gets good wages and has a steady job most of his or her life can get as much as $85 a month for life after age sixty-five. The least he can get in monthly benefits, if he comes under the law at all, is $10 a month.

If the employee should die before he begins to get "old-age benefit" checks, his family will receive a payment in cash amounting to 3½ cents on every dollar of wages which he has earned after 1936.

Should the worker lose his job and not be able to find another within a period of approximately two to four weeks, he is entitled to compensation up to $15 a week. Unemployment benefits under the Social Security Act, however, are administered by the several states. Each state has its own regulations governing the amount of compensation paid, the time during which it must be paid, and other details.

# APPENDIX I I I

## Test I, Constant Number Pages

THE WORDS UNDERLINED BY 301 NINTH GRADE STUDENTS, THE PLACEMENT OF THESE WORDS IN THE THORNDIKE SCALE AND THE NUMBER OF TIMES THE WORDS WERE MISSED

| 1,000 | Times Missed | 1,000 | Times Missed |
|---|---|---|---|
| natural | 3 | services | 1 |

| 2,000 | Times Missed | 2,000 | Times Missed |
|---|---|---|---|
| apply | 2 | exactly | 1 |
| avenues | 6 | indicated | 7 |
| addition | 1 | metal | 1 |
| according | 1 | render | 35 |
| ancient | 1 | rude | 1 |
| capital | 1 | sections | 1 |
| conducted | 1 | | |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| elements | 7 | process | 2 |
| fortunate | 3 | proportion | 15 |
| inclined | 3 | refined | 3 |
| individual | 1 | recently | 1 |
| instruction | 1 | relatively | 37 |
| magnificent | 11 | rural | 1 |
| occupations | 2 | source | 4 |
| otherwise | 1 | vary | 3 |
| privilege | 1 | venture | 25 |

| 4,000 | Times Missed | 4,000 | Times Missed |
|---|---|---|---|
| attractive | 1 | inferior | 36 |
| continuously | 6 | previous | 3 |
| derived | 24 | procure | 40 |
| device | 28 | remote | 36 |
| enable | 5 | substitute | 6 |
| extent | 4 | thereby | 1 |
| fertile | 4 | | |

| 5,000 | Times Missed | 5,000 | Times Missed |
|---|---|---|---|
| conveniences | 9 | notable | 12 |
| distribute | 4 | operates | 3 |
| entertainment | 3 | organizations | 1 |
| equip | 2 | primary | 4 |
| illustrate | 7 | quarries | 27 |
| management | 4 | tanning | 5 |
| leisure | 13 | underground | 1 |

| 6,000 | Times Missed | 6,000 | Times Missed |
|---|---|---|---|
| crude | 7 | resources | 7 |
| heretofore | 42 | retail | 2 |
| unnumerable | 30 | | |

| 7,000 | Times Missed | 7,000 | Times Missed |
|---|---|---|---|
| activities | 3 | electricity | 1 |
| approximately | 7 | moccasins | 1 |
| durable | 16 | secondary | 70 |

| 8,000 | Times Missed | 8,000 | Times Missed |
|---|---|---|---|
| available | 14 | transit | 14 |
| cooperation | 3 | unlimited | 2 |
| mechanism | 42 | | |

| 9,000 | Times Missed | 9,000 | Times Missed |
|---|---|---|---|
| discontinued | 2 | intricate | 128 |
| incentive | 131 | | |

| 15,000 | Times Missed |
|---|---|
| parochial | 217 |

APPENDIX I V

THE WORDS UNDERLINED BY 264 NINTH GRADE STUDENTS, THE PLACEMENT OF THESE WORDS IN THE THORNDIKE SCALE AND THE NUMBER OF TIMES THE WORDS WERE MISSED
Test II, Constant Number Pages

| 1,000 | Times Missed | 1,000 | Times Missed |
|---|---|---|---|
| command | 1 | perfecting | 1 |
| houses | 1 | | |

| 2,000 | Times Missed | 2,000 | Times Missed |
|---|---|---|---|
| based | 1 | occasions | 1 |
| carriage | 1 | qualities | 2 |
| character | 1 | rarely | 1 |
| courage | 2 | severest | 8 |
| determines | 3 | societies | 3 |
| include | 1 | systems | 1 |
| judgment | 1 | willingly | 1 |
| lacking | 1 | | |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| abundance | 5 | elements | 3 |
| accuse | 1 | esteem | 34 |
| acquire | 2 | humor | 1 |
| ambition | 4 | offend | 3 |
| associate | 3 | patience | 1 |
| confidence | 5 | reveals | 1 |
| convinced | 2 | sympathy | 2 |
| cultivated | 6 | vigor | 8 |
| drafts | 1 | | |

| 4,000 | Times Missed | 4,000 | Times Missed |
|---|---|---|---|
| communication | 4 | reverence | 13 |
| fulfilled | 1 | substitutes | 1 |
| geniuses | 17 | violated | 16 |
| infinitely | 1 | welfare | 2 |

| 5,000 | Times Missed | 5,000 | Times Missed |
|---|---|---|---|
| attitude | 3 | hinges | 1 |
| conclusion | 1 | interview | 8 |
| courtesy | 1 | loyalty | 1 |
| enthusiasm | 38 | profession | 1 |
| essentially | 57 | satisfactorily | 5 |
| expression | 1 | squeaky | 2 |
| genuine | 3 | unnecessarily | 2 |

| 6,000 | Times Missed | 6,000 | Times Missed |
|---|---|---|---|
| advancement | 1 | injustice | 6 |
| communicate | 2 | modesty | 9 |
| definite | 1 | poise | 8 |
| enthusiastic | 2 | sincerity | 9 |
| hopeful | 1 | wardrobe | 3 |

| 7,000 | Times Missed | 7,000 | Times Missed |
|---|---|---|---|
| absolutely | 2 | mental | 1 |
| achievement | 15 | observance | 13 |
| criticism | 7 | perseverance | 79 |
| economy | 15 | personality | 2 |
| factors | 4 | pronunciation | 1 |
| friction | 13 | recreation | 3 |

| 8,000 | Times Missed | 8,000 | Times Missed |
|---|---|---|---|
| appreciation | 7 | initiative | 72 |
| habitually | 15 | relationship | 2 |
| indefinite | 2 | tact | 57 |

| 9,000 | Times Missed | 9,000 | Times Missed |
|---|---|---|---|
| civility | 27 | politeness | 3 |
| competent | 20 | ventilated | 1 |

| 11,000 | Times Missed | 11,000 | Times Missed |
|---|---|---|---|
| rasping | 3 | slouchy | 3 |

| 12,000 | Times Missed | 13,000 | Times Missed |
|---|---|---|---|
| sarcasm | 52 | placards | 16 |

| 14,000 | Times Missed | 15,000 | Times Missed |
|---|---|---|---|
| | | incandescent | 1 |
| aviator | 1 | inventive | 20 |
| optimism | 129 | manicuring | 1 |
| | | meanness | 1 |

| 16,000 | Times Missed | 17,000 | Times Missed |
|---|---|---|---|
| correctness | 1 | sparingly | 8 |
| enunciation | 58 | | |

| 19,000 | Times Missed | 20,000 | Times Missed |
|---|---|---|---|
| grouchy | 5 | genuineness | 24 |
| punctuality | 35 | gracefulness | 3 |
| | | tactful | 2 |

| Over 20,000 | Times Missed |
|---|---|
| faultfinding | 2 |
| self-esteem | 26 |

## APPENDIX V

THE WORDS UNDERLINED BY 301 NINTH GRADE STUDENTS, THE PLACEMENT OF THESE WORDS IN THE THORNDIKE SCALE AND THE NUMBER OF TIMES THE WORDS WERE MISSED

### Test I, All Material Read by Each Student

| 1,000 | Times Missed | 1,000 | Times Missed |
|---|---|---|---|
| businesses | 1 | receive | 1 |
| certain | 1 | service | 1 |
| chain | 5 | shaping | 1 |
| direct | 1 | stores | 2 |
| gathering | 1 | therefore | 1 |
| general | 1 | whether | 1 |
| housed | 1 | wider | 1 |
| increased | 1 | | |
| iron | 1 | | |
| natural | 2 | | |

| 2,000 | Times Missed | 2,000 | Times Missed |
|---|---|---|---|
| accomplishing | 1 | immediately | 1 |
| according | 1 | indicated | 11 |
| addition | 2 | industry | 3 |
| advanced | 1 | influence | 1 |
| advised | 1 | knowledge | 2 |
| ancient | 1 | limited | 1 |
| apply | 2 | maintain | 7 |
| authority | 2 | materials | 1 |
| avenues | 5 | metal | 1 |
| beams | 1 | observed | 1 |
| capital | 2 | obtain | 2 |
| cease | 6 | particular | 2 |
| central | 1 | possessed | 1 |
| concern | 2 | private | 1 |
| conducted | 2 | quantities | 3 |
| consider | 3 | render | 45 |
| controlling | 1 | savage | 1 |
| districts | 1 | sections | 1 |
| engage | 1 | shares | 1 |
| especially | 2 | sole | 13 |
| established | 1 | stable | 1 |
| exactly | 1 | various | 2 |
| frequently | 8 | | |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| agriculture | 1 | constructed | 1 |
| assume | 1 | contrary | 1 |
| borrow | 1 | conveniently | 6 |
| commercial | 16 | deposit | 1 |
| confidence | 1 | elements | 12 |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| enormous | 20 | poverty | 1 |
| evident | 6 | practically | 1 |
| favorable | 1 | preparation | 2 |
| flourished | 5 | privilege | 4 |
| fortunate | 5 | process | 4 |
| inclined | 2 | proportion | 14 |
| individual | 7 | raw | 1 |
| instruction | 1 | recently | 2 |
| lends | 1 | refined | 1 |
| machinery | 1 | relatively | 58 |
| magnificent | 15 | rural | 1 |
| machinery | | similar | 1 |
| multitude | 15 | source | 5 |
| occupation | 2 | sufficient | 2 |
| ordinary | 3 | vary | 3 |
| otherwise | 2 | venture | 28 |
| policies | 2 | withdrawn | 1 |

| 4,000 | Times Missed | 4,000 | Times Missed |
|---|---|---|---|
| apparent | 21 | gardener | 1 |
| attractive | 1 | inferior | 41 |
| basis | 1 | involve | 2 |
| charter | 1 | justified | 1 |
| community | 1 | likewise | 1 |
| considerable | 1 | Massachusetts | 1 |
| continuously | 7 | merchandise | 4 |
| converting | 35 | mutual | 2 |
| derived | 27 | nevertheless | 4 |
| devices | 14 | previous | 10 |
| employees | 1 | procure | 44 |
| enable | 6 | prosperity | 4 |
| exhausted | 3 | remote | 44 |
| expensive | 1 | substitute | 13 |
| exist | 4 | thereby | 1 |
| extent | 11 | transferable | 2 |
| fertile | 4 | unusually | 1 |
| formerly | 1 | welfare | 3 |

| 5,000 | Times Missed | 5,000 | Times Missed |
|---|---|---|---|
| additional | 3 | corporation | 4 |
| agency | 1 | desirable | 4 |
| agreement | 1 | distribute | 14 |
| certificate | 1 | enterprises | 33 |
| consequently | 4 | entertainment | 2 |
| constituted | 1 | equip | 1 |
| contribute | 1 | extensive | 30 |
| conveniences | 7 | financial | 4 |

| 5,000 | Times Missed | 5,000 | Times Missed |
|---|---|---|---|
| illustrate | 9 | partial | 1 |
| income | 1 | primary | 7 |
| incur | 14 | production | 4 |
| leisure | 14 | quarries | 32 |
| management | 5 | random | 78 |
| notable | 23 | security | 2 |
| obligations | 1 | tanning | 5 |
| operates | 3 | underground | 1 |
| organizations | 2 | | |

| 6,000 | Times Missed | 6,000 | Times Missed |
|---|---|---|---|
| crude | 18 | innumerable | 29 |
| edition | 1 | paragraphs | 1 |
| eminent | 5 | preceding | 4 |
| equipment | 1 | regulations | 1 |
| furthermore | 8 | resources | 8 |
| heretofore | 52 | retail | 11 |

| 7000 | Times Missed | 7,000 | Times Missed |
|---|---|---|---|
| activities | 4 | obviously | 12 |
| approximately | 11 | proprietor | 18 |
| civilization | 2 | regardless | 6 |
| commodities | 37 | scarcely | 2 |
| durable | 22 | secondary | 75 |
| electricity | 2 | specific | 2 |
| eliminated | 19 | technical | 36 |
| mechanical | 4 | utility | 3 |
| monopolies | 5 | wholesale | 8 |

| 8,000 | Times Missed | 8,000 | Times Missed |
|---|---|---|---|
| accumulate | 16 | indefinitely | 1 |
| adequately | 11 | limitations | 1 |
| available | 19 | mechanism | 45 |
| Cincinnati | 1 | reinforced | 14 |
| compensation | 12 | responsibilities | 3 |
| cooperation | 3 | revert | 46 |
| devise | 12 | transit | 16 |
| domain | 2 | undoubtedly | 1 |
| efficient | 19 | unlimited | 3 |
| handicapped | 7 | | |

| 9,000 | Times Missed | 9,000 | Times Missed |
|---|---|---|---|
| acceptable | 1 | intricate | 132 |
| consumers | 9 | maximum | 14 |
| cooperative | 1 | miscellaneous | 14 |
| discontinued | 2 | prospective | 11 |
| formalities | 7 | ruinous | 1 |
| incentive | 140 | transactions | 4 |
| inconvenient | 14 | | |

| 10,000 | Times Missed | 10,000 | Times Missed |
|---|---|---|---|
| forestry | 3 | summary | 3 |
| Lynn | 1 | theoretically | 5 |
| ore | 1 | unscrupulous | 2 |
| preferable | 1 | widespread | 3 |

| 11,000 | Times Missed | 12,000 | Times Missed |
|---|---|---|---|
| basic | 56 | distributors | 1 |
| corporate | 2 | inefficiency | 1 |
| liability | 4 | specify | 1 |
| | | typical | 5 |
| | | retailers | 2 |

| 13,000 | Times Missed | 14,000 | Times Missed |
|---|---|---|---|
| conceivable | 19 | borrowers | 1 |
| dealt | 4 | stockholder | 1 |
| editing | 5 | | |

| 15,000 | Times Missed | 19,000 | Times Missed |
|---|---|---|---|
| centralized | 4 | deceptive | 3 |
| parochial | 226 | proprietorship | 4 |
| replacement | 2 | | |
| unauthorized | 2 | | |

| Over 20,000 | Times Missed | Over 20,000 | Times Missed |
|---|---|---|---|
| Cedar Rapids | 2 | self-sustaining | 55 |
| copartnership | 10 | semi-public | 2 |
| depositor | 3 | unabridged | 39 |
| salesclerks | 2 | uninsured | 1 |
| | | usable | 1 |

## APPENDIX VI

THE WORDS UNDERLINED BY 264 NINTH GRADE STUDENTS, THE PLACEMENT OF THESE WORDS IN THE THORNDIKE SCALE AND THE NUMBER OF TIMES THE WORDS WERE MISSED

**Test II, All Material Read by Each Student**

| 1,000 | Times Missed | 1,000 | Times Missed |
|---|---|---|---|
| allowed | 1 | natural | 1 |
| billing | 2 | office | 1 |
| common | 1 | perfecting | 1 |
| command | 1 | prepares | 1 |
| entire | 1 | seedy | 2 |
| general | 1 | self | 1 |
| houses | 1 | through | 1 |
| left | 1 | | |

| 2,000 | Times Missed | 2,000 | Times Missed |
|---|---|---|---|
| accomplish | 1 | mapping | 1 |
| actual | 2 | opportunities | 1 |
| advance | 1 | occasions | 1 |
| benefit | 1 | particular | 2 |
| character | 2 | prefer | 1 |
| concern | 1 | preventing | 1 |
| courage | 2 | promptness | 1 |
| determines | 4 | qualities | 1 |
| effort | 1 | quantities | 4 |
| experienced | 1 | rarely | 1 |
| frankly | 2 | regular | 1 |
| frequently | 2 | sense | 1 |
| hence | 1 | severest | 6 |
| include | 1 | societies | 1 |
| lack | 2 | systems | 1 |
| lazily | 1 | willingly | 1 |
| mistakes | 1 | | |
| machines | 1 | | |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| abundance | 3 | construct | 1 |
| accuse | 1 | consulting | 3 |
| acquire | 2 | conversation | 1 |
| ambition | 2 | convinced | 2 |
| associate | 2 | cultivated | 4 |
| column | 1 | developed | 1 |
| confidence | 3 | distinguished | 1 |

| 3,000 | Times Missed | 3,000 | Times Missed |
|---|---|---|---|
| division | 1 | principle | 3 |
| domestic | 1 | positions | 2 |
| elements | 3 | proportioning | 3 |
| esteem | 5 | provisions | 2 |
| examination | 2 | receipts | 1 |
| file | 2 | reveal | 3 |
| fortunately | 2 | satisfaction | 1 |
| humor | 2 | skill | 3 |
| individuals | 3 | social | 1 |
| interrupting | 1 | strives | 2 |
| occupations | 1 | symphy | 1 |
| offend | 3 | tempting | 2 |
| peculiar | 3 | vigor | 10 |
| physician | 2 | | |

| 4,000 | Times Missed | 4,000 | Times Missed |
|---|---|---|---|
| capacity | 7 | infinitely | 19 |
| communication | 6 | institution | 1 |
| contempt | 1 | involves | 1 |
| correspondence | 5 | merchandising | 8 |
| decisions | 2 | prosperity | 5 |
| destined | 1 | reverence | 11 |
| energy | 1 | symbols | 2 |
| estimate | 4 | temptations | 1 |
| falsehood | 2 | violated | 19 |
| forging | 2 | welfare | 1 |
| fulfilled | 1 | worthless | 1 |
| formerly | 1 | | |

| 5,000 | Times Missed | 5,000 | Times Missed |
|---|---|---|---|
| appreciate | 2 | financial | 7 |
| attitude | 2 | genuine | 5 |
| certificate | 2 | hinges | 1 |
| conclusion | 4 | intelligent | 2 |
| courtesy | 1 | interview | 7 |
| distribution | 1 | loyalty | 1 |
| deprive | 1 | obstacles | 15 |
| embroiders | 6 | organizations | 3 |
| enterprises | 16 | profession | 2 |
| enthusiasm | 41 | satisfactorily | 4 |
| essentially | 54 | security | 2 |
| executive | 12 | squeaky | 2 |
| expression | 1 | unnecessarily | 2 |

| 6,000 | Times Missed | 6,000 | Times Missed |
|---|---|---|---|
| advancement | 3 | promotion | 4 |
| assistant | 1 | publication | 2 |
| chaos | 42 | resources | 1 |
| communicate | 4 | retail | 3 |
| definite | 3 | schedule | 1 |
| enthusiastic | 14 | sincerity | 9 |
| injustice | 6 | sinful | 1 |
| miser | 2 | tendency | 7 |
| modesty | 8 | thrifty | 2 |
| persisted | 13 | vertical | 2 |
| poise | 7 | wardrobe | 2 |

| 7,000 | Times Missed | 7,000 | Times Missed |
|---|---|---|---|
| absolutely | 2 | finance | 1 |
| accurately | 3 | flaws | 7 |
| achievement | 12 | friction | 15 |
| administer | 2 | fruitlessly | 2 |
| approximately | 3 | fundamental | 1 |
| calculating | 11 | literally | 2 |
| charitable | 22 | observance | 6 |
| criticism | 8 | penalty | 1 |
| depression | 1 | perseverance | 82 |
| determination | 4 | personality | 3 |
| economy | 10 | pronunciation | 1 |
| elementary | 3 | professional | 1 |
| factors | 4 | readiness | 1 |
| | | recreation | 3 |

| 8,000 | Times Missed | 8,000 | Times Missed |
|---|---|---|---|
| accumulated | 5 | fitness | 2 |
| accuracy | 6 | habitually | 14 |
| adequately | 2 | indefinite | 11 |
| alert | 5 | initiative | 91 |
| appreciation | 6 | instantly | 2 |
| budget | 1 | laboratory | 1 |
| compensation | 4 | originating | 4 |
| conserved | 1 | specialize | 1 |
| counselor | 7 | symptoms | 1 |
| deferred | 7 | tact | 55 |
| economically | 2 | utilize | 2 |
| efficiently | 2 | verified | 31 |
| expenditures | 8 | | |

| 9,000 | Times Missed | 9,000 | Times Missed |
|---|---|---|---|
| ammonia | 2 | politeness | 3 |
| appliance | 1 | procedure | 5 |
| blindfold | 1 | thrift | 2 |
| civilty | 24 | underline | 4 |
| competent | 17 | unemployment | 1 |
| infallible | 4 | ventilated | 1 |

| 10,000 | Times Missed | 10,000 | Times Missed |
|---|---|---|---|
| auditor | 6 | persistence | 29 |
| certified | 7 | reliance | 3 |
| classified | 1 | stenographer | 4 |
| confront | 3 | stenographic | 5 |
| dishonesty | 1 | textiles | 7 |
| mastery | 3 | vocation | 4 |

| 11,000 | Times Missed | 12,000 | Times Missed |
|---|---|---|---|
| accountant | 11 | dictation | 4 |
| clerical | 37 | ledger | 7 |
| depreciation | 3 | sarcasm | 45 |
| rasping | 5 | transcribe | 3 |
| slouchy | 2 | | |

| 13,000 | Times Missed | 14,000 | Times Missed |
|---|---|---|---|
| grammatically | 24 | aptitude | 79 |
| placards | 14 | audited | 5 |
| transcript | 5 | aviator | 1 |
| | | optimism | 131 |

| 15,000 | Times Missed | 16,000 | Times Missed |
|---|---|---|---|
| incandescent | 60 | correctness | 1 |
| inventive | 15 | enunciation | 62 |
| manicuring | 1 | systematic | 63 |
| meanness | 1 | systematically | 9 |
| replacements | 2 | substitution | 1 |

| 17,000 | Times Missed | 18,000 | Times Missed |
|---|---|---|---|
| preventable | 1 | flashy | 1 |
| sparingly | 6 | forte | 39 |
| | | shorthand | 1 |
| | | stingy | 2 |

| 19,000 | Times Missed | 20,000 | Times Missed |
|---|---|---|---|
| grouchy | 7 | genuineness | 23 |
| punctuality | 31 | gracefulness | 2 |
| slipshod | 14 | interdependence | 6 |
| | | resourceful | 22 |
| | | resourcefulness | 10 |
| | | tactful | 17 |

| Over 20,000 | Times Missed | Over 20,000 | Times Missed |
|---|---|---|---|
| faultfinding | 3 | stick-to-it-iveness | 10 |
| geniuses | 15 | storeselling | 1 |
| roster | 6 | switchboard | 1 |
| self-esteem | 55 | unreliable | 3 |
| self-reliance | 8 | | |

## APPENDIX VII

WORDS IN SOLID READING MATTER OF LLOYD L. JONES' OUR BUSINESS LIFE THAT HAVE A RATING OF 7,000 OR ABOVE IN THORNDIKE'S TEACHER'S WORD BOOK OF 20,000 WORDS, LISTED ALPHABETICALLY BY LEVEL WITH THE FREQUENCY OF OCCURRENCE

| 7,000 | Frequency | 7,000 | Frequency |
|---|---|---|---|
| absolutely | 1 | destination | 12 |
| accidental | 2 | determination | 3 |
| accomplished | 1 | dictionary | 8 |
| accurate | 23 | dimensions | 2 |
| achievement | 1 | disadvantage | 10 |
| activities | 33 | discretion | 1 |
| administer | 1 | dispatch | 1 |
| advertisements | 19 | dividends | 17 |
| advocates | 1 | economy | 2 |
| allowance | 3 | effectively | 2 |
| analyzed | 2 | electricity | 4 |
| announcements | 1 | elevators | 2 |
| anticipating | 1 | eliminate | 2 |
| appropriate | 1 | emergencies | 4 |
| approximately | 5 | embarked | 1 |
| approval | 1 | embody | 1 |
| architect | 1 | emphasis | 7 |
| arithmetic | 3 | employer | 38 |
| authorized | 12 | equivalent | 1 |
| automatic | 3 | everyday | 3 |
| baggage | 29 | excluding | 1 |
| birthplace | 1 | expansion | 1 |
| bulletins | 1 | explorers | 2 |
| calculating | 6 | facilities | 3 |
| charitable | 1 | factors | 1 |
| civilization | 8 | fidelity | 4 |
| classification | 10 | finance | 1 |
| cleanliness | 1 | foregoing | 1 |
| clergymen | 2 | fraternal | 1 |
| clients | 8 | friction | 1 |
| cocoa | 8 | fundamental | 3 |
| commodities | 3 | gigantic | 1 |
| complex | 1 | hazard | 2 |
| comprises | 1 | hereby | 1 |
| contemporary | 1 | historical | 1 |
| crated | 4 | honesty | 6 |
| conveyance | 2 | horizontally | 5 |
| currency | 2 | identical | 2 |
| custody | 1 | impartial | 1 |
| decades | 1 | inclinations | 1 |
| defective | 1 | indifference | 2 |
| define | 1 | ingenuity | 1 |
| demonstration | 4 | initials | 26 |
| dependent | 9 | inspection | 1 |
| depression | 5 | insure | 36 |

| 7,000 | Frequency | 7,000 | Frequency |
|---|---|---|---|
| intoxicated | 1 | requirements | 19 |
| investment | 50 | reservation | 5 |
| irrigations | 1 | resistance | 1 |
| irritating | 1 | rigid | 1 |
| lapses | 1 | roadside | 1 |
| leadership | 12 | rotary | 1 |
| leasing | 3 | salutations | 10 |
| lifetime | 4 | scientific | 11 |
| loans | 29 | sculpture | 1 |
| locality | 1 | sensitive | 2 |
| luxurious | 1 | specific | 15 |
| manuscript | 1 | stewards | 1 |
| mattress | 1 | stimulating | 4 |
| meager | 1 | storage | 6 |
| mechanical | 2 | subscribing | 1 |
| membership | 2 | surnames | 3 |
| mentally | 2 | surety | 1 |
| Minnesota | 1 | surmounting | 2 |
| misunderstanding | 4 | surplus | 5 |
| mortality | 3 | taxation | 1 |
| naval | 1 | technical | 5 |
| obvious | 1 | terminate | 2 |
| occurrence | 1 | theft | 3 |
| omission | 1 | toll | 3 |
| panic | 1 | tradesmen | 3 |
| participate | 6 | training | 23 |
| partitions | 3 | transparent | 1 |
| penalty | 3 | unwise | 4 |
| per cent | 68 | utensils | 1 |
| perseverance | 2 | utilities | 8 |
| personality | 11 | vehicles | 1 |
| porcelain | 2 | vocabulary | 4 |
| postman | 2 | vowels | 1 |
| predict | 1 | waiter | 2 |
| preferences | 5 | warehouses | 3 |
| premiums | 45 | whereas | 2 |
| primitive | 3 | wholesale | 8 |
| professional | 27 | wholesaler | 2 |
| pronunciations | 3 | | |
| proprietor | 8 | | |
| publishers | 6 | | |
| quotations | 4 | | |
| ratio | 1 | | |
| rebuild | 3 | | |
| receiver | 7 | | |
| recreation | 6 | | |
| regardless | 5 | | |
| reproduce | 2 | | |

| 8,000 | Frequency | 8,000 | Frequency |
|---|---|---|---|
| abstract | 1 | definitions | 1 |
| academic | 1 | deliberation | 1 |
| accumulated | 13 | democratic | 1 |
| accuracy | 9 | dentists | 5 |
| acknowledgement | 3 | designate | 4 |
| adapted | 3 | diary | 6 |
| adjustments | 5 | dissolution | 3 |
| adult | 1 | duplicate | 6 |
| alert | 1 | eagerness | 2 |
| almanac | 2 | economical | 6 |
| alphabet | 9 | economist | 1 |
| analyses | 1 | editorials | 1 |
| appreciation | 5 | educational | 2 |
| appropriations | 2 | efficient | 13 |
| arbitrary | 1 | elaborate | 1 |
| available | 21 | emphasize | 4 |
| bankrupt | 1 | empowered | 2 |
| beneficial | 2 | encyclopedias | 5 |
| Berlin | 1 | enumerating | 2 |
| budget | 78 | estimation | 1 |
| cancelled | 16 | eventually | 1 |
| carbon | 16 | executor | 3 |
| carelessness | 2 | expenditures | 8 |
| certainty | 1 | explosion | 1 |
| chauffeur | 4 | feudal | 2 |
| chemicals | 3 | filament | 1 |
| chemist | 3 | formula | 2 |
| circulate | 1 | fragile | 4 |
| climax | 1 | gambling | 1 |
| code | 26 | geographical | 6 |
| coinage | 3 | goldsmith | 2 |
| compensation | 7 | hamper | 1 |
| complicated | 3 | hundredths | 2 |
| compressively | 1 | identifying | 1 |
| compress | 2 | implies | 1 |
| compulsory | 1 | improperly | 1 |
| computing | 4 | inasmuch | 11 |
| contentment | 1 | indented | 3 |
| continuation | 6 | informal | 2 |
| contractions | 1 | inquisitive | 1 |
| cooperation | 10 | installment | 41 |
| correspondent | 15 | international | 2 |
| counselor | 1 | intervenes | 1 |
| counterfeiting | 1 | intrust | 1 |
| cramped | 1 | laboratories | 3 |
| crank | 1 | landlord | 3 |
| critical | 2 | maintenance | 3 |
| deferred | 1 | manual | 12 |

| 8,000 | Frequency | 8,000 | Frequency |
|---|---|---|---|
| miniature | 1 | trustee | 3 |
| minimum | 10 | undoubtedly | 8 |
| minor | 2 | unimportant | 1 |
| mislead | 2 | unlimited | 2 |
| monotonous | 1 | unloaded | 1 |
| murderous | 1 | usage | 1 |
| necessitated | 1 | utilize | 1 |
| negotiate | 12 | verify | 1 |
| nineteenth | 1 | waterproof | 1 |
| operator | 43 | welding | 1 |
| oral | 1 | | |
| originating | 1 | 9,000 | |
| persuasive | 1 | | |
| pamphlet | 2 | Alaska | 4 |
| Pharoahs | 1 | appliances | 5 |
| pith | 2 | apprentices | 2 |
| plus | 13 | assignments | 1 |
| popularity | 2 | atlases | 2 |
| posters | 2 | backbone | 1 |
| precaution | 1 | beginners | 2 |
| presentation | 1 | benevolences | 1 |
| preservation | 1 | berths | 4 |
| projection | 1 | blindfolded | 1 |
| qualifications | 8 | bookcases | 1 |
| qualified | 1 | brackets | 1 |
| reassuring | 1 | bus | 19 |
| relationship | 7 | civic | 2 |
| remodeling | 1 | collectors | 1 |
| removal | 1 | collision | 7 |
| responsibility | 32 | compensated | 1 |
| restriction | 1 | competent | 6 |
| rightfully | 1 | concessions | 1 |
| safeguarding | 3 | consolidated | 3 |
| sanitation | 1 | construed | 1 |
| seller | 2 | consumer | 33 |
| sequence | 2 | conventional | 1 |
| significant | 2 | cooperative | 7 |
| solicitor | 2 | coordinate | 1 |
| specialize | 14 | detaches | 2 |
| storehouses | 1 | discarding | 1 |
| subscribers | 22 | discontinued | 2 |
| suburban | 1 | dishonest | 6 |
| supplanted | 2 | disregarded | 3 |
| tact | 1 | duration | 1 |
| tallow | 1 | earthenware | 1 |
| termination | 1 | economic | 3 |
| tourist | 7 | efficiency | 8 |
| transact | 6 | enclosure | 14 |
| transit | 1 | endowment | 8 |

| 9,000 | Frequency |
|---|---|
| examiners | 2 |
| fluent | 1 |
| foreman | 1 |
| formulate | 1 |
| girth | 4 |
| guidance | 1 |
| inactive | 2 |
| illegal | 1 |
| inconvenient | 2 |
| incorrect | 4 |
| indication | 3 |
| inducement | 1 |
| industrial | 1 |
| inexperienced | 2 |
| inflection | 1 |
| innkeeper | 2 |
| intermittently | 1 |
| interruption | 1 |
| junction | 5 |
| jungles | 1 |
| legislative | 1 |
| maturity | 8 |
| maximum | 6 |
| miscellaneous | 4 |
| mutilated | 1 |
| negligence | 6 |
| notary | 3 |
| old-fashioned | 1 |
| ownership | 13 |
| partnership | 30 |
| payable | 22 |
| percentage | 8 |
| pineapple | 1 |
| politics | 1 |
| premises | 1 |
| preparatory | 1 |
| printers | 1 |
| privacy | 1 |
| procedure | 8 |
| prospective | 7 |
| Quebec | 2 |
| questionable | 1 |
| realization | 1 |
| reconciliation | 3 |
| reconstruction | 2 |
| recourse | 1 |
| refrigerators | 3 |
| remittances | 2 |
| research | 1 |
| rotating | 2 |
| selfishness | 1 |
| simplify | 2 |
| spike | 1 |
| stationery | 3 |
| statistics | 5 |
| submarine | 1 |
| subordinate | 1 |
| supervision | 13 |
| supervisors | 7 |
| supplements | 1 |
| Syracuse | 6 |
| thrift | 36 |
| transactions | 22 |
| transmitted | 7 |
| truthful | 1 |
| uncertainty | 1 |
| underlined | 1 |
| unemployment | 2 |
| unlawful | 3 |
| unused | 1 |
| voucher | 9 |
| wager | 1 |

| 10,000 | Frequency |
|---|---|
| accessories | 1 |
| administrators | 3 |
| adventurer | 1 |
| aluminum | 1 |
| applicant | 9 |
| appraised | 1 |
| athletes | 1 |
| auditors | 1 |
| bankruptcy | 1 |
| bartered | 10 |
| beacon | 1 |
| booklet | 8 |
| brevity | 5 |
| broadcasting | 3 |
| broker | 12 |
| calculation | 3 |
| census | 2 |
| certified | 3 |
| chieftain | 1 |
| citizenship | 4 |
| classified | 12 |

| 10,000 | Frequency |
|---|---|
| clicks | 2 |
| congestion | 1 |
| compartments | 1 |
| competitive | 1 |
| consecutively | 1 |
| contractors | 2 |
| craftsmen | 2 |
| data | 4 |
| deducted | 6 |
| dependency | 2 |
| depreciate | 1 |
| detriment | 1 |
| discounts | 46 |
| discredit | 1 |
| dishonesty | 1 |
| dissatisfied | 1 |
| eject | 1 |
| electrified | 1 |
| erosion | 1 |
| expiration | 4 |
| facilitate | 4 |
| familiarity | 1 |
| firewood | 1 |
| franc | 2 |
| incalculable | 1 |
| incomplete | 2 |
| indorsed | 35 |
| innovation | 1 |
| jotting | 1 |
| lecturers | 1 |
| Louisiana | 3 |
| mammoth | 1 |
| manila | 1 |
| minus | 2 |
| obtainable | 1 |
| ore | 5 |
| outgoing | 14 |
| overnight | 2 |
| passport | 7 |
| phase | 1 |
| plumbing | 1 |
| practic able | 1 |
| preferrable | 1 |
| prepaid | 5 |
| presumably | 1 |
| principally | 2 |
| producers | 3 |
| purchaser | 14 |
| react | 1 |
| reliance | 1 |
| reputable | 2 |
| restrict | 1 |
| restrictive | 3 |
| silverware | 1 |
| slanting | 1 |
| specialist | 4 |
| stenographers | 16 |
| storekeepers | 8 |
| subway | 4 |
| summary | 4 |
| systematic | 4 |
| unfavorable | 1 |
| unpaid | 6 |
| unsatisfactory | 1 |
| untiring | 1 |
| valid | 2 |
| variations | 2 |
| violations | 1 |
| vocations | 2 |
| Wampum | 1 |
| waterways | 1 |
| wrapper | 2 |
| **11,000** | |
| accessible | 1 |
| accountants | 4 |
| advisable | 2 |
| apprenticeship | 4 |
| assess | 1 |
| assets | 4 |
| Babylonian | 2 |
| basement | 1 |
| basic | 3 |
| boulder | 1 |
| by-laws | 1 |
| cardboard | 9 |
| chattel | 3 |
| clearness | 3 |
| clerical | 3 |
| compile | 2 |
| concisely | 1 |
| couriers | 2 |

| 11,000 | Frequency | 12,000 | Frequency |
|---|---|---|---|
| denominations | 14 | accrued | 1 |
| dental | 1 | allowable | 1 |
| dynamos | 1 | annually | 9 |
| enrollment | 1 | attainment | 1 |
| ethics | 2 | burglary | 2 |
| etiquette | 1 | candid | 1 |
| extravagance | 2 | canvasser | 3 |
| folder | 15 | collateral | 4 |
| forceful | 1 | complimentary | 6 |
| forgery | 1 | container | 5 |
| franchises | 1 | copyright | 2 |
| fulfillment | 1 | decimal | 1 |
| indemnity | 4 | dictation | 4 |
| insanity | 1 | distributor | 1 |
| interstate | 5 | dissatisfaction | 1 |
| inventory | 20 | domesticate | 1 |
| liabilities | 20 | donations | 1 |
| mathematical | 1 | drudgery | 1 |
| overcharge | 1 | endanger | 1 |
| pending | 1 | enforcement | 2 |
| perforated | 2 | equalized | 1 |
| plumbers | 2 | excises | 1 |
| possessive | 1 | fraudulent | 1 |
| pottery | 1 | governmental | 11 |
| prefix | 1 | identification | 13 |
| psychology | 2 | incapacity | 1 |
| radio | 1 | inclusive | 2 |
| reminder | 3 | indentation | 1 |
| repaid | 3 | indicator | 3 |
| Rex | 1 | invoice | 9 |
| skeptical | 1 | ledger | 4 |
| speculate | 1 | lender | 2 |
| stairway | 1 | librarian | 2 |
| stubs | 30 | logical | 2 |
| stupefied | 1 | mercantile | 1 |
| supervised | 5 | mileage | 2 |
| supervises | 9 | Minneapolis | 1 |
| synonyms | 1 | notebook | 5 |
| tornado | 1 | numeric | 6 |
| transmission | 4 | nutritive | 1 |
| unmistakably | 1 | observatory | 1 |
| unnoticed | 1 | overlapping | 1 |
| unpack | 2 | outgrown | 1 |
| unseasonable | 1 | pedestrian | 5 |
| veritable | 1 | postmasters | 3 |
| vestibule | 1 | recipient | 1 |
| wasteful | 1 | refund | 5 |
| wick | 1 | reliability | 2 |
| wicket | 1 | retailers | 2 |

| 12,000 | Frequency |
|---|---|
| revolutionized | 2 |
| rudeness | 1 |
| serial | 1 |
| shiny | 1 |
| shipper | 23 |
| shopkeepers | 1 |
| soundness | 1 |
| specified | 20 |
| specialty | 4 |
| St. Louis | 1 |
| straight-forward | 1 |
| subdivisions | 3 |
| substraction | 3 |
| timidity | 1 |
| transcribes | 1 |
| typical | 5 |
| undesirable | 1 |
| usefulness | 4 |
| **13,000** | |
| a.m. | 1 |
| abbreviations | 6 |
| administrative | 3 |
| alphabetically | 52 |
| assessment | 3 |
| calmness | 1 |
| casualty | 3 |
| categories | 1 |
| celluloid | 1 |
| Chaldean | 1 |
| cipher | 6 |
| comptroller | 1 |
| crayons | 1 |
| diplomatic | 1 |
| directories | 36 |
| economize | 1 |
| elimination | 1 |
| handwriting | 14 |
| installation | 1 |
| laundering | 1 |
| lawsuit | 3 |
| memorandum | 15 |
| notation | 4 |
| orderly | 1 |
| overseers | 1 |
| p.m. | 1 |
| photographer | 1 |
| populated | 1 |
| promoters | 3 |

| 13,000 | Frequency |
|---|---|
| recorder | 1 |
| scrip | 1 |
| Seneca | 1 |
| shortage | 5 |
| slot | 1 |
| specifically | 3 |
| standpoint | 2 |
| stipulates | 2 |
| subdivided | 1 |
| suitcase | 1 |
| tenacity | 1 |
| typewriting | 1 |
| United States | 54 |
| untidy | 1 |
| valuation | 2 |
| **14,000** | |
| affixing | 6 |
| amplifiers | 1 |
| antonyms | 1 |
| apportionment | 1 |
| Atlanta | 1 |
| bookkeepers | 13 |
| cancellation | 1 |
| clearance | 1 |
| crier | 1 |
| custodian | 1 |
| cyclones | 1 |
| dependable | 4 |
| discourteous | 2 |
| discrepancies | 1 |
| egotism | 1 |
| elk | 1 |
| felony | 1 |
| incompetent | 2 |
| indelible | 1 |
| instantaneous | 1 |
| instills | 1 |
| insulation | 1 |
| investor | 16 |
| irregularities | 3 |
| justifiable | 1 |
| legible | 3 |
| manipulating | 1 |
| neatness | 1 |
| objective | 1 |
| optimism | 1 |
| outstanding | 4 |
| perishable | 2 |
| borrowers | 15 |

| 14,000 | Frequency |
|---|---|
| personnel | 11 |
| proxy | 1 |
| quota | 1 |
| requisition | 6 |
| rewriting | 1 |
| search-light | 1 |
| specialization | 1 |
| stockholders | 13 |
| taxicab | 1 |
| textbook | 2 |
| traits | 4 |
| Transylvania | 1 |
| unskilled | 1 |
| urban | 1 |
| vendor | 1 |
| voyagers | 1 |
| well-known | 2 |
| **15,000** | |
| advisory | 2 |
| apportioned | 1 |
| assessor | 3 |
| automatically | 3 |
| beneficiary | 12 |
| bullion | 1 |
| cafeteria | 1 |
| collided | 1 |
| composers | 1 |
| cumbersome | 1 |
| deterioration | 1 |
| durability | 1 |
| explicit | 1 |
| gazetteer | 1 |
| gondola | 1 |
| indemnify | 8 |
| intersection | 1 |
| letterhead | 6 |
| liners | 1 |
| llamas | 1 |
| manliness | 1 |
| mathematician | 1 |
| pleasurable | 1 |
| prospector | 1 |
| rental | 1 |
| residential | 7 |
| reticence | 1 |
| slogan | 1 |

| 15,000 | Frequency |
|---|---|
| statistical | 3 |
| talkative | 1 |
| unforeseen | 1 |
| veracity | 1 |
| vocational | 2 |
| **16,000** | |
| afterthought | 1 |
| annuity | 4 |
| annum | 1 |
| by-products | 2 |
| condolence | 3 |
| deficit | 1 |
| engineering | 1 |
| enunciation | 1 |
| excitable | 1 |
| incorporation | 8 |
| interchangeable | 1 |
| interurban | 1 |
| lexicon | 1 |
| popularized | 1 |
| promissory | 9 |
| reimburse | 2 |
| shortcomings | 2 |
| stationer | 1 |
| systematically | 2 |
| taxpayer | 1 |
| testator | 2 |
| transmitter | 1 |
| typist | 8 |
| unaided | 1 |
| unopened | 1 |
| visualizes | 1 |
| **17,000** | |
| bellows | 1 |
| business-like | 12 |
| commuters | 2 |
| dressmaking | 1 |
| engraving | 3 |
| exhibitors | 1 |
| first-class | 13 |
| idioms | 1 |
| inexpensive | 1 |
| lockers | 1 |
| Memphis | 4 |
| monetary | 1 |

| 17,000 | Frequency |
|---|---|
| organizers | 1 |
| papyrus | 4 |
| par | 8 |
| registry | 1 |
| silversmith | 3 |
| speedily | 1 |
| stage-coach | 1 |
| stencils | 1 |
| withdrawal | 15 |
| yearbooks | 2 |
| synopsis | 1 |
| typewritten | 7 |
| unwavering | 1 |
| utilization | 1 |
| **18,000** | |
| apostrophe | 1 |
| brokerage | 2 |
| cablegram | 12 |
| chef | 1 |
| coherence | 2 |
| convertible | 1 |
| Dallas | 1 |
| debit | 1 |
| Deutschland | 1 |
| discourtesy | 1 |
| enjoyable | 1 |
| enthusiastically | 1 |
| flashy | 1 |
| grapefruit | 1 |
| headlines | 1 |
| high school | 1 |
| Homeric | 1 |
| hyphen | 1 |
| italics | 1 |
| Kansas City | 1 |
| lien | 1 |
| middlemen | 1 |
| passers-by | 1 |
| pay-roll | 1 |
| presupposes | 1 |
| probate | 1 |
| scientifically | 1 |
| self-respect | 1 |
| shorthand | 6 |
| Spokane | 1 |
| stateroom | 1 |
| stenography | 2 |
| stingy | 2 |

| 19,000 | Frequency |
|---|---|
| adaptability | 2 |
| alertness | 1 |
| bungles | 1 |
| caretakers | 1 |
| educators | 2 |
| incompetence | 1 |
| indorsement | 57 |
| lessee | 1 |
| lira | 1 |
| proprietorship | 8 |
| punctuality | 1 |
| punctuation | 4 |
| punishable | 1 |
| reams | 3 |
| reassurance | 1 |
| repossessed | 1 |
| salesmanship | 13 |
| streetcars | 2 |
| suavity | 1 |
| systematize | 1 |
| temporarily | 1 |
| triplicate | 1 |
| waterworks | 2 |
| **20,000** | |
| appraisal | 2 |
| attaches | 1 |
| biographical | 1 |
| cabinet-making | 1 |
| carload | 2 |
| enforceable | 2 |
| excelsior | 1 |
| guaranty | 1 |
| hereunto | 1 |
| inadvisable | 1 |
| inoperative | 1 |
| interpendence | 2 |
| motor car | 3 |
| newsboy | 1 |
| overdue | 1 |
| parentheses | 1 |
| self-consciousness | 1 |
| self-control | 1 |
| sender | 7 |
| shareholders | 1 |
| shipowners | 1 |
| specie | 1 |
| tactful | 1 |
| trailers | 2 |
| underscoring | 1 |
| Yonkers | 1 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| above-named | 1 | code-rate | 2 |
| actuaries | 1 | coin-box | 5 |
| adaptable | 2 | coinsurance | 12 |
| addressee | 27 | coin-wrappers | 3 |
| agent-driver | 1 | collectible | 1 |
| airliners | 1 | collect-on-delivery | 1 |
| airmail | 1 | common-law | 1 |
| airplanes | 19 | common-sense | 1 |
| airways | 1 | compactness | 2 |
| aliquot | 9 | conciseness | 2 |
| anti-social | 1 | consignee | 21 |
| aquitania | 1 | consignor | 3 |
| Berengaria | 1 | conte di savoia | 1 |
| best-known | 2 | contractual | 1 |
| best-qualified | 1 | Coolidge | 1 |
| best-trained | 1 | copartnership | 4 |
| billboards | 5 | Cortland | 1 |
| biographies | 4 | costal | 1 |
| birchbark | 1 | coverage | 1 |
| bondholders | 3 | cowries | 1 |
| book-unit | 1 | credit-rating | 1 |
| breadwinner | 1 | cross-indexed | 2 |
| breakable | 1 | cross-reference | 14 |
| Bremen | 1 | cross-word | 1 |
| Budapest | 1 | date-due | 2 |
| burglar-proof | 1 | day-coach | 1 |
| bus-line | 2 | decoded | 1 |
| cabin-class | 2 | deductible | 2 |
| caption | 5 | demurrage | 1 |
| carpentry | 1 | dentistry | 1 |
| carry-alls | 1 | dining-car | 1 |
| cash-and-carry | 5 | direct-by-mail | 1 |
| cash-register | 1 | diversification | 2 |
| cash-surrender | 4 | docket | 1 |
| catalogue-file | 1 | door-to-door | 1 |
| caveat emptor | 1 | drawee | 9 |
| caveat mercator | 1 | drawing-room | 1 |
| caveat venditor | 1 | dry goods | 1 |
| change-making | 2 | dugouts | 1 |
| change-of-address | 1 | egotistical | 1 |
| charge-account | 1 | electric-power | 2 |
| check-stub | 2 | Empress of Britain | 1 |
| check-writing | 2 | end-of-month | 1 |
| Cincinnati | 1 | end-of-season | 2 |
| civil-service | 3 | envelope-sealing | 1 |
| classified-business | 1 | eraserer | 2 |
| clear-cut | 1 | Europe | 1 |
| clock-wise | 1 | fearlessness | 1 |
| closing-out | 1 | fifteen-word | 1 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| filled-in | 1 | indicia | 2 |
| fingerstop | 1 | individual-line | 1 |
| fire-insurance | 1 | ink-eradicator | 1 |
| first-hand | 1 | insurable | 13 |
| five-and-ten-cent | 2 | inter-city | 1 |
| five-minute | 1 | interest-bearing | 5 |
| five-sixths | 1 | interest-finding | 1 |
| follow-up | 11 | interrelated | 1 |
| footnote | 1 | interrelation | 1 |
| four-fifths | 3 | itemized | 1 |
| four-party | 1 | jay-walking | 1 |
| four-wheel | 1 | kingsway | 1 |
| four-year | 1 | large-scale | 1 |
| fourth-class | 5 | large-sized | 1 |
| freight-arrival | 2 | last-made | 2 |
| full-rate | 12 | left-hand | 7 |
| full-time | 1 | left-over | 1 |
| gadget | 1 | legal-size | 1 |
| gate-man | 1 | letter-opening | 2 |
| get-rich-quick | 1 | liberal arts | 3 |
| gilt-edged | 1 | life-insurance | 1 |
| going-out-of-business | 1 | light-face | 1 |
| government-built | 1 | limited-payment | 7 |
| government-operated | 1 | lithographing | 1 |
| government-owned | 1 | living-room | 1 |
| great-grandmother | 1 | local-subscriber | 2 |
| guarantor | 1 | long-distance | 11 |
| guesswork | 1 | long-established | 1 |
| gummed paper | 1 | long-felt | 1 |
| hair-dressers | 1 | long-term | 1 |
| half-yearly | 1 | long-trip | 1 |
| Hamburg | 2 | loose-leaf | 1 |
| handbag | 1 | lost-and-found | 3 |
| hand-operated | 1 | low-pitched | 1 |
| Hansa | 1 | low-priced | 1 |
| hard-to-please | 1 | lunch-room | 1 |
| heliographs | 1 | mailable | 2 |
| help-wanted | 2 | mail-expected | 2 |
| hereinafter | 2 | mail-order | 5 |
| high-grade | 1 | man-made | 1 |
| high pressure | 2 | mile-an-hour | 1 |
| hitch-hiking | 2 | misinterrupted | 1 |
| holdup | 1 | Monarch of Bremuda | 1 |
| horse-drawn | 2 | money-making | 1 |
| hyphenated | 1 | month-by-month | 1 |
| Ile de France | 1 | mortgagee | 1 |
| illegibly | 2 | mortgagor | 1 |
| impalled | 1 | most-likely-to-be-called-for | 1 |
| incoming | 15 | most-used | 1 |
| indention | 2 | never-ending | 1 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| newstand | 1 | preapproach | 1 |
| night-letter | 3 | present-day | 1 |
| non-interest-bearing | 5 | pressboard | 1 |
| non-negotiable | 1 | private-branch | 4 |
| non-participating | 2 | private-line | 1 |
| Normandy | 1 | proof-readers | 1 |
| numerators | 1 | property-damage | 2 |
| nursemaids | 1 | public-school | 1 |
| old-age | 1 | public-service | 5 |
| old-line | 1 | purchase-order | 2 |
| on-coming | 1 | pursuant | 1 |
| one-cent | 1 | Queen of Bremuda | 1 |
| one-fifth | 3 | radiogram | 5 |
| one-half | 4 | ready-reference | 1 |
| oneness | 1 | real estate | 11 |
| one-person | 1 | receiving-platform | 2 |
| one-tenth | 1 | redcaps | 3 |
| one-third | 5 | reduced-rate | 1 |
| oneway | 1 | registered-mail | 1 |
| onondaga | 3 | regular-payment | 1 |
| orders-received | 1 | reimbursement | 2 |
| orders-unfilled | 1 | reinvested | 2 |
| out-of-town | 4 | remailing | 1 |
| out-of-season | 1 | reread | 1 |
| overdrawing | 4 | retail-store | 1 |
| overstocking | 1 | return-receipt | 1 |
| over-the-counter | 1 | right-hand | 3 |
| paid-up | 4 | road-building | 1 |
| paper-wrapped | 1 | round-the-world | 1 |
| parcel-checking | 3 | round-trip | 2 |
| parcel-post | 15 | safe-deposit | 2 |
| parlor-car | 2 | safe-keeping | 1 |
| part-time | 2 | safety-vault | 1 |
| part-payment | 1 | salable | 1 |
| partial-payment | 1 | salespeople | 2 |
| party-line | 1 | second-class | 6 |
| payee | 39 | self-addressed | 1 |
| pay-station | 4 | self-assurance | 1 |
| pen-written | 1 | self-confidence | 2 |
| person-to-person | 6 | self-rating | 2 |
| personal-service | 1 | self-realization | 1 |
| plate-glass | 1 | self-service | 1 |
| policy-holder | 10 | self-winding | 1 |
| postdated | 2 | semi-annually | 2 |
| postmark | 1 | seven-day | 1 |
| postmaster-general | 2 | seven-sixths | 1 |
| power-driven | 1 | shiftlessness | 1 |
| power-operated | 1 | ship-to-shore | 1 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| shop-worn | 1 | transferrable | 1 |
| sibilants | 1 | transoceanic | 2 |
| situation-wanted | 4 | transporter | 1 |
| skeletonize | 1 | truthfulness | 1 |
| sleeping-car | 4 | tusk | 1 |
| slow-moving | 1 | twenty-eight | 1 |
| small-scale | 1 | twenty-five | 9 |
| small-sized | 1 | twenty-four | 4 |
| so-and-so | 4 | twenty-one | 2 |
| social-business | 1 | twenty-payment | 2 |
| South America | 1 | twenty-six | 1 |
| spear-head | 1 | turn screw | 1 |
| special-delivery | 1 | twenty-two | 1 |
| spendthrift | 3 | two-thirds | 1 |
| station-to-station | 7 | two-wheel | 1 |
| statisticians | 1 | typographical | 1 |
| stock-market | 8 | unattractive | 2 |
| stock-room | 10 | unclaimed | 1 |
| stock-selling | 1 | unconvincing | 1 |
| stop-and-go | 2 | undamaged | 1 |
| stop-over | 1 | undecided | 1 |
| straight-edge | 1 | underlapping | 1 |
| streamline | 2 | undersigned | 1 |
| substandard | 1 | understandable | 1 |
| switchboards | 4 | understudy | 1 |
| tearoom | 1 | unregistered | 1 |
| technician | 1 | unreliability | 1 |
| telegraphic | 6 | unsealed | 1 |
| telephone-directory | 1 | unspent | 1 |
| teletypewriter | 1 | up-to-date | 3 |
| ten-year | 1 | used-car | 1 |
| thesaurus | 3 | verification | 2 |
| thoughtlessness | 1 | visa | 1 |
| third-class | 6 | voidable | 2 |
| thirty-five | 1 | voucher-form | 1 |
| three-fourths | 2 | warranty | 1 |
| three-minute | 2 | wastebasket | 1 |
| time-saving | 2 | week-end | 1 |
| time-table | 11 | well-being | 2 |
| Tokyo | 1 | well-expressed | 1 |
| underwriters | 1 | well-indexed | 1 |
| ungrammatical | 1 | well-managed | 3 |
| toll-call | 1 | well-marked | 1 |
| tourist-class | 1 | well-modulated | 1 |
| tradesschool | 1 | well-paid | 1 |
| traffic-signal | 1 | well-thought-out | 1 |
| trainman | 3 | womanliness | 1 |
| so-called | 1 | worldwide | 1 |
| | | wrongdoer | 1 |

## APPENDIX VIII

WORDS IN EXERCISES, PROBLEMS AND SUPPLEMENTARY MATERIAL OF LLOYD L. JONES' OUR BUSINESS LIFE THAT HAVE A RATING OF 7,000 OR ABOVE IN THORNDIKE'S TEACHER'S WORD BOOK OF 20,000 WORDS, LISTED ALPHABETICALLY BY LEVELS WITH THE FREQUENCY OF OCCURRENCE

| 7,000 | Frequency | 7,000 | Frequency |
|---|---|---|---|
| accidentally | 1 | exterior | 1 |
| accurately | 7 | facilities | 2 |
| activities | 24 | factor | 1 |
| advertisement | 10 | fidelity | 3 |
| allowance | 11 | fixtures | 4 |
| analyze | 1 | fundamental | 1 |
| anticipate | 1 | gear | 1 |
| approximate | 3 | generosity | 1 |
| arithmetic | 2 | historical | 2 |
| authorize | 4 | hobby | 5 |
| bacteria | 1 | honesty | 3 |
| baggage | 10 | horizontal | 11 |
| bulletin | 1 | identical | 2 |
| calculate | 9 | imaginary | 2 |
| classification | 7 | initials | 8 |
| cleanliness | 4 | insure | 11 |
| clergyman | 1 | invalid | 1 |
| client | 3 | investment | 23 |
| cocoa | 1 | irritated | 1 |
| commodities | 3 | leadership | 3 |
| comprises | 1 | lease | 2 |
| conservation | 1 | lifetime | 1 |
| cubic | 6 | loan | 11 |
| currency | 1 | manuscripts | 2 |
| declaration | 3 | mechanical | 1 |
| defective | 1 | mental | 1 |
| democracy | 1 | mentally | 1 |
| dependent | 4 | Minnesota | 1 |
| depression | 2 | mortality | 2 |
| destination | 1 | necktie | 1 |
| dictionary | 6 | observance | 1 |
| dimensions | 1 | participate | 1 |
| disadvantage | 20 | penalty | 3 |
| dividends | 3 | per cent | 43 |
| draperies | 1 | perseverance | 2 |
| electricity | 4 | personality | 4 |
| effective | 2 | preference | 1 |
| elementary | 3 | premium | 19 |
| eliminate | 1 | professional | 13 |
| embody | 1 | proprietor | 7 |
| employer | 9 | receiver | 1 |
| enjoyment | 1 | recreation | 6 |
| equivalent | 1 | requirements | 10 |

| 7,000 | Frequency |
|---|---|
| reservations | 1 |
| rigid | 1 |
| royalties | 3 |
| salutation | 1 |
| scientific | 1 |
| specific | 4 |
| storage | 2 |
| subscribing | 3 |
| surmount | 1 |
| theft | 3 |
| toll | 1 |
| training | 6 |
| utilities | 3 |
| vehicles | 2 |
| vocabulary | 1 |
| waiters | 1 |
| warehouse | 1 |
| wholesale | 7 |
| yeast | 1 |
| **8,000** | |
| abstract | 1 |
| accumulate | 1 |
| accuracy | 4 |
| adapt | 2 |
| adequate | 1 |
| adjustment | 3 |
| adult | 1 |
| allotted | 1 |
| almanac | 1 |
| alphabet | 3 |
| appreciation | 1 |
| available | 7 |
| bankrupt | 1 |
| budget | 60 |
| camera | 2 |
| cancel | 3 |
| carbon | 1 |
| cereal | 1 |
| certainty | 2 |
| chemical | 1 |
| Cincinnati | 7 |
| cleaners | 1 |
| code | 6 |
| coinage | 2 |
| compensation | 2 |
| competitors | 1 |

| 8,000 | Frequency |
|---|---|
| compulsory | 1 |
| computing | 1 |
| conform | 2 |
| continental | 1 |
| continuation | 1 |
| correspondent | 2 |
| counterfeiting | 1 |
| creed | 1 |
| deferred | 1 |
| democratic | 1 |
| dentist | 4 |
| designate | 1 |
| Detroit | 5 |
| diagram | 1 |
| diary | 3 |
| dissolution | 1 |
| duplicate | 1 |
| efficient | 1 |
| encyclopedias | 4 |
| endurance | 1 |
| enumerate | 2 |
| evaporated | 1 |
| expenditures | 3 |
| gilt | 1 |
| identify | 1 |
| imply | 1 |
| inasmuch | 1 |
| incorporated | 1 |
| installment | 15 |
| international | 2 |
| Kentucky | 1 |
| limitations | 3 |
| manual | 7 |
| minimum | 4 |
| minors | 1 |
| negotiate | 5 |
| operator | 6 |
| persuasive | 1 |
| plus | 6 |
| Plymouth | 2 |
| posture | 1 |
| persuasive | 1 |
| presentation | 1 |
| qualification | 3 |
| qualified | 1 |
| responsibility | 14 |
| sequence | 1 |
| signet | 1 |

| 8,000 | Frequency |
|---|---|
| significant | 1 |
| solicitor | 2 |
| speculation | 1 |
| spine | 1 |
| subscriber | 3 |
| suburban | 1 |
| tourist | 1 |
| transact | 1 |
| undoubtedly | 1 |
| unlimited | 2 |
| ventilation | 1 |
| **9,000** | |
| acceptable | 1 |
| aggressive | 1 |
| Alaska | 1 |
| apprentice | 1 |
| assignment | 3 |
| atlas | 3 |
| bevel | 1 |
| bus | 10 |
| collision | 2 |
| consolidated | 4 |
| consumer | 4 |
| cooperative | 3 |
| Denver | 2 |
| discontinuing | 1 |
| dishonest | 1 |
| dishonorably | 1 |
| efficiency | 2 |
| enclosure | 3 |
| endowment | 9 |
| faultless | 4 |
| fluctuations | 1 |
| incidental | 1 |
| incorrectly | 1 |
| inexperienced | 1 |
| innkeepers | 1 |
| insertion | 1 |
| maximum | 2 |
| miscellaneous | 3 |
| ownership | 3 |
| partnership | 15 |
| payable | 8 |
| percentage | 10 |

| 9,000 | Frequency |
|---|---|
| pineapple | 1 |
| portable | 5 |
| printers | 1 |
| procedure | 6 |
| prospective | 2 |
| reconciliation | 3 |
| renewal | 4 |
| reporter | 1 |
| Roosevelt | 1 |
| spiral | 1 |
| spotlessly | 1 |
| stationery | 7 |
| supervision | 2 |
| thrift | 6 |
| transactions | 18 |
| truthful | 1 |
| uncertainty | 1 |
| unemployment | 1 |
| voucher | 4 |
| **10,000** | |
| accessories | 2 |
| administrators | 2 |
| aluminum | 1 |
| applicant | 2 |
| barter | 5 |
| booklet | 1 |
| brevity | 5 |
| brokers | 4 |
| calculation | 1 |
| certified | 4 |
| citizenship | 1 |
| classified | 7 |
| commencement | 1 |
| data | 6 |
| deducting | 1 |
| discount | 9 |
| dishonesty | 1 |
| indorse | 16 |
| Louisiana | 1 |
| manila | 2 |
| metropolitan | 3 |
| outgoing | 2 |
| passport | 2 |
| prepaid | 5 |

| 10,000 | Frequency |
|---|---|
| producer | 1 |
| restrictive | 1 |
| Salem | 1 |
| self-control | 1 |
| stenographer | 12 |
| storekeeper | 1 |
| subway | 2 |
| summary | 11 |
| textiles | 1 |
| unfair | 2 |
| unfavorable | 1 |
| verbal | 2 |
| watt | 8 |
| **11,000** | |
| accountant | 2 |
| ambulance | 2 |
| assessed | 4 |
| Babylonians | 1 |
| cardboard | 1 |
| cartoon | 1 |
| chattel | 1 |
| clearness | 4 |
| clerical | 1 |
| compile | 1 |
| denominations | 4 |
| dental | 2 |
| ethics | 3 |
| folder | 3 |
| forgery | 1 |
| hexagon | 1 |
| indemnity | 1 |
| insanity | 1 |
| interstate | 1 |
| inventory | 25 |
| jeweler | 4 |
| liabilities | 7 |
| loaves | 1 |
| overcharged | 1 |
| Overhanging | 1 |
| possessive | 1 |
| stub | 10 |
| supervise | 1 |

| 12,000 | Frequency |
|---|---|
| annually | 7 |
| Bismarck | 2 |
| Buffalo | 2 |
| canvasser | 1 |
| collateral | 3 |
| complimentary | 1 |
| congested | 2 |
| copyright | 1 |
| creditable | 2 |
| decimals | 1 |
| dignified | 1 |
| distributors | 2 |
| elucidate | 2 |
| emotionally | 1 |
| governmental | 2 |
| identification | 1 |
| importer | 2 |
| inefficiency | 1 |
| invoice | 4 |
| ledger | 6 |
| lender | 1 |
| Los Angeles | 11 |
| mileage | 1 |
| notebook | 23 |
| numeric | 2 |
| outlying | 1 |
| reliability | 2 |
| retailer | 4 |
| serial | 1 |
| shippers | 4 |
| similiarity | 4 |
| specialty | 2 |
| specifications | 5 |
| specify | 2 |
| St. Louis | 2 |
| subtraction | 4 |
| summarize | 3 |
| vacuum | 1 |
| unselfishly | 1 |
| unwritten | 1 |

| 13,000 | Frequency |
|---|---|
| abbreviations | 1 |
| administrative | 1 |
| alphabetically | 15 |
| campus | 2 |
| casualty | 2 |
| cipher | 1 |
| congressman | 1 |
| directory | 20 |
| handwriting | 19 |
| memorandum | 9 |
| necessarily | 1 |
| New Jersey | 1 |
| p.m. | 6 |
| pullman | 1 |
| rearrange | 4 |
| recitation | 2 |
| tuition | 1 |
| United States | 27 |
| valuation | 1 |
| **14,000** | |
| affixing | 1 |
| aptitude | 1 |
| bookkeeper | 3 |
| borrowers | 2 |
| Butte | 3 |
| curriculum | 1 |
| dependable | 1 |
| discourteous | 2 |
| discrepancies | 1 |
| flexibility | 1 |
| incompetent | 1 |
| investor | 10 |
| irregularities | 1 |
| legible | 3 |
| neatness | 2 |
| objective | 1 |
| outstanding | 1 |
| patronized | 1 |
| personnel | 7 |
| requisition | 11 |
| rewrite | 1 |
| Seattle | 6 |
| search-light | 1 |
| stabilize | 1 |
| stockholder | 2 |

| 14,000 | Frequency |
|---|---|
| textbook | 2 |
| trait | 4 |
| tubular | 1 |
| well-known | 5 |
| Yellowstone | 2 |
| **15,000** | |
| apportion | 1 |
| assessor | 1 |
| beneficiary | 3 |
| cafeteria | 1 |
| durability | 1 |
| elective | 1 |
| geographic | 1 |
| intersection | 1 |
| keyboard | 1 |
| letterhead | 2 |
| lugs | 1 |
| maroon | 2 |
| parochial | 1 |
| quarterly | 3 |
| residential | 1 |
| slogan | 1 |
| statistical | 1 |
| upkeep | 2 |
| vocational | 1 |
| **16,000** | |
| abbreviated | 2 |
| annuity | 1 |
| classroom | 1 |
| donate | 1 |
| inaccurate | 1 |
| promissory | 6 |
| proportionally | 1 |
| reimburses | 1 |
| stationers | 1 |
| typist | 6 |
| **17,000** | |
| bellows | 1 |
| bookkeeping | 1 |
| business-like | 4 |
| first-class | 4 |
| inexpensive | 1 |

| 17,000 | Frequency |
|---|---|
| Memphis | 1 |
| Nashville | 2 |
| overtime | 1 |
| papyrus | 1 |
| par | 4 |
| registry | 2 |
| semesters | 4 |
| Southhampton | 2 |
| stage-coach | 1 |
| windshield | 1 |
| withdrawal | 2 |
| yearbook | 1 |
| **18,000** | |
| alignment | 1 |
| apostrophe | 1 |
| avocation | 1 |
| cablegram | 3 |
| Dallas | 2 |
| debit | 1 |
| electrotype | 1 |
| Havre | 1 |
| headlines | 1 |
| high school | 1 |
| hyphen | 1 |
| inflation | 1 |
| Kansas City | 3 |
| propellor | 1 |
| second-hand | 1 |
| shorthand | 2 |
| smudge | 1 |
| speedometers | 1 |
| Spokane | 3 |
| stenography | 1 |
| trimmers | 1 |
| typewritten | 3 |
| **19,000** | |
| adaptability | 1 |
| coaster | 1 |
| educators | 3 |
| incompetency | 1 |
| indorsement | 17 |
| Logan | 2 |
| kilowatt | 3 |
| proprietorship | 7 |

| 19,000 | Frequency |
|---|---|
| punctuation | 1 |
| reams | 11 |
| salesmanship | 4 |
| street-car | 4 |
| thoroughbred | 1 |
| **20,000** | |
| appraisal | 1 |
| carload | 1 |
| blotter | 1 |
| optional | 1 |
| orphanage | 1 |
| overdue | 1 |
| sender | 1 |
| shareholders | 1 |
| specie | 2 |
| **Over 20,000** | |
| above-named | 1 |
| addressee | 1 |
| alphabetizing | 1 |
| anti-freeze | 1 |
| airline | 1 |
| airmail | 1 |
| airplanes | 9 |
| bensine | 1 |
| better-business | 1 |
| better-known | 1 |
| bookstore | 2 |
| cabin-class | 1 |
| cash-and-carry | 3 |
| caveat emptor | 1 |
| caveat venditor | 1 |
| change-making | 1 |
| charge-account | 2 |
| check-stub | 4 |
| closing-out | 1 |
| coin-drop | 3 |
| coin-sorting | 1 |
| coinsurance | 3 |
| coin-wrappers | 2 |
| compound-interest | 1 |
| consignee | 3 |
| consignor | 1 |
| copartnership | 5 |
| credit-rating | 1 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| cross-reference | 2 | motor bus | 2 |
| crosswalk | 1 | Mortgagee | 1 |
| day-coach | 1 | mortgagor | 1 |
| deductible | 1 | motor-truck | 2 |
| demurrage | 1 | native-born | 1 |
| dependability | 3 | newsprint | 1 |
| dining-car | 1 | night-letter | 1 |
| diversification | 1 | ocean-going | 1 |
| double-form | 1 | office-supply | 1 |
| drawee | 3 | one-fifth | 1 |
| end-of-season | 1 | one-fourth | 2 |
| follow-up | 2 | one-half | 1 |
| foreign-born | 1 | one-way | 3 |
| forty-year | 1 | out-of-town | 1 |
| fourth-class | 3 | overdrawing | 2 |
| freight-arrival | 2 | paid-up | 1 |
| full-rate | 2 | parcel post | 4 |
| galoshes | 1 | part-time | 2 |
| going-out-of-business | 1 | party-line | 2 |
| Hamburg | 1 | passenger-train | 1 |
| heavy-weight | 1 | pay station | 2 |
| heliograph | 1 | payee | 7 |
| help-wanted | 2 | pen holder | 5 |
| high-class | 1 | penwritten | 1 |
| incoming | 8 | person-to-person | 2 |
| insurable | 4 | personal-service | 1 |
| job-specifications | 1 | policyholder | 1 |
| labor-saving | 1 | present-day | 1 |
| left-handed | 6 | private line | 2 |
| legibility | 2 | property-damage | 1 |
| letter-opening | 1 | purchase-order | 3 |
| life-insurance | 5 | radio-broadcasting | 1 |
| light-weight | 1 | radiograms | 2 |
| limited-payment | 2 | real estate | 3 |
| local-subscribers | 1 | receiving platform | 3 |
| long-distance | 13 | recheck | 1 |
| lost-and-found | 1 | redcaps | 1 |
| mail-expected | 2 | reinvested | 1 |
| mail-order | 2 | return-receipt-requested | 1 |
| maroon-colored | 1 | reversed charge | 1 |
| medium-weight | 1 | right-handed | 1 |
| mid-Atlantic | 1 | rock-bottom | 1 |
| middle-aged | 1 | round-trip | 4 |
| money-order | 1 | second-class | 1 |
| most-used | 1 | self-rating | 1 |
| motion-picture | 2 | self-realization | 2 |

| Over 20,000 | Frequency | Over 20,000 | Frequency |
|---|---|---|---|
| self-service | 1 | | |
| self-supporting | 1 | | |
| semi-annually | 10 | | |
| single-premium | 1 | | |
| situation-wanted | 2 | | |
| skeletonizing | 1 | | |
| sleeping car | 1 | | |
| spacer | 1 | | |
| spiral bound | 12 | | |
| sportmanship | 1 | | |
| station-to-station | 7 | | |
| statistician | 1 | | |
| stenographic | 3 | | |
| stick-to-it-iveness | 1 | | |
| stock room | 5 | | |
| suitability | 1 | | |
| switchboard | 2 | | |
| technicians | 1 | | |
| telegraphic | 5 | | |
| ten-payment | 1 | | |
| thesaurus | 1 | | |
| third-class | 3 | | |
| thirty-payment | 1 | | |
| tickler | 1 | | |
| time saver | 1 | | |
| time table | 8 | | |
| time wire | 1 | | |
| twenty-payment | 1 | | |
| unreliability | 1 | | |
| untidiness | 1 | | |
| up-bringing | 1 | | |
| visa | 1 | | |
| voucher form | 1 | | |
| wind breaker | 1 | | |

APPENDIX IX

WORDS DEFINED BY LLOYD L. JONES IN THE SOLID READING MATTER OF OUR BUSINESS LIFE, ARRANGED ALPHABETICALLY WITH THORNDIKE PLACEMENT AND FREQUENCY OF OCCURRENCE

| Defined Words | Thorndike Rating | Times Missed | Defined Words | Thorndike Rating | Times Missed |
|---|---|---|---|---|---|
| abstract | 8 | 1 | dependent | 7 | 9 |
| activities | 7 | 33 | diary | 8 | 6 |
| administrators | 10 | 3 | directory | 13 | 36 |
| assets | 11 | 4 | discount | 10 | 46 |
| apprenticeship | 11 | 4 | dividends | 7 | 17 |
| assessor | 15 | 3 | diversification | / | 2 |
| barter | 10 | 10 | drawee | / | 9 |
| berth | 9 | 4 | duplicate | 8 | 6 |
| brokerage | 18 | 2 | dynamos | 11 | 1 |
| brokers | 10 | 12 | emergency | 7 | 4 |
| budget | 8 | 78 | encyclopedias | 8 | 5 |
| cabin class | / * | 2 | executor | 8 | 3 |
| cash and carry | / | 5 | fourth-class | / | 5 |
| caveat emptor | / | 1 | fragile | 8 | 4 |
| caveat mercator | / | 1 | gateman | / | 1 |
| caveat venditor | / | 1 | going-out-of-business | / | 1 |
| certified | 10 | 3 | governmental | 12 | 11 |
| classification | 7 | 10 | heliographs | / | 1 |
| chattel | 11 | 3 | inactive | 9 | 2 |
| clearness | 11 | 3 | incompetence | 19 | 1 |
| clients | 7 | 8 | indorse | 10 | 35 |
| closing out | / | 1 | indorsement | 19 | 57 |
| coinsurance | / | 12 | innkeepers | 9 | 2 |
| coin wrapper | / | 3 | indemnity | 11 | 4 |
| collectors | 9 | 1 | installments | 8 | 41 |
| collision | 9 | 7 | inventory | 11 | 20 |
| compensation | 8 | 7 | invoice | 12 | 9 |
| competent | 9 | 6 | itemized | / | 1 |
| complimentary | 12 | 6 | justifiable | 14 | 1 |
| compress | 8 | 2 | lapses | 7 | 1 |
| condolence | 16 | 3 | lease | 7 | 3 |
| consignee | / | 21 | ledger | 12 | 4 |
| consignor | / | 3 | lessee | 19 | 1 |
| cooperative | 9 | 7 | letterhead | 15 | 6 |
| copartnership | / | 4 | liabilities | 11 | 20 |
| correspondent | 8 | 15 | mail order | / | 5 |
| couriers | 11 | 2 | manual | 8 | 12 |
| defective | 7 | 1 | maturity | 9 | 8 |
| demurrage | / | 1 | memorandum | 13 | 15 |
| denominations | 11 | 14 | mileage | 12 | 2 |
| cancel | 3 | 16 | | | |

* / designates those words above 20,000 level.

| Defined Words | Thorndike Rating | Times Missed | Defined Words | Thorndike Rating | Times Missed |
|---|---|---|---|---|---|
| mortgagee | / | 1 | testator | 16 | 2 |
| mortgagor | / | 1 | thesaurus | / | 3 |
| mutilated | 9 | 1 | third class | / | 6 |
| negligence | 9 | 6 | thrift | 9 | 36 |
| negotiate | 8 | 12 | time table | / | 11 |
| night letter | / | 3 | toll | 7 | 3 |
| non-negotiable | / | 1 | tourist | 8 | 7 |
| numeric | 12 | 6 | utilities | 7 | 8 |
| outstanding | 14 | 4 | valid | 10 | 2 |
| overdrawing | / | 4 | vestibule | 11 | 1 |
| papyrus | 17 | 4 | voidable | / | 2 |
| part payment | / | 1 | wholesale | 7 | 8 |
| partial payment | / | 1 | wrapper | 10 | 2 |
| participates | 7 | 6 | | | |
| partitions | 7 | 3 | | | |
| partnership | 9 | 30 | | | |
| payee | / | 39 | | | |
| person-to-person | / | 6 | | | |
| personal service | / | 1 | | | |
| personality | 7 | 11 | | | |
| personnel | 14 | 11 | | | |
| postdated | / | 2 | | | |
| preapproach | / | 1 | | | |
| premium | 7 | 45 | | | |
| prepaid | 10 | 5 | | | |
| professional | 7 | 27 | | | |
| promissory | 16 | 9 | | | |
| promoter | 13 | 3 | | | |
| proprietor | 7 | 8 | | | |
| psychology | 11 | 2 | | | |
| qualified | 8 | 1 | | | |
| radiograms | / | 5 | | | |
| real estate | / | 11 | | | |
| reconciliation | 9 | 3 | | | |
| redcaps | / | 3 | | | |
| relationship | 8 | 7 | | | |
| remittances | 9 | 2 | | | |
| requisitions | 14 | 6 | | | |
| restriction | 8 | 1 | | | |
| roadside | 7 | 1 | | | |
| repossessed | 19 | 1 | | | |
| second-class | / | 6 | | | |
| self-service | / | 1 | | | |
| special delivery | / | 1 | | | |
| specialty | 12 | 4 | | | |
| station-to-station | / | 7 | | | |
| stockholder | 14 | 13 | | | |
| stop-over | / | 1 | | | |
| subscribers | 8 | 22 | | | |
| supervisor | 9 | 7 | | | |

Typist: Geneva Cochran

STUDENT REFERENCE BIBLIOGRAPHY


Directly Related Information

Cleaver, William H., The Art of Floral Designing, A. T. De La Mare Company, 1930

Florists' Review, The Designer's Notebook, Florists' Publishing Company, 1938

Kift, Robert, The Retail Flower Shop, A. T. De La Mare Company 1930

Laurie, Alex, The Flower Shop, Florists' Publishing Company 1930

Indirectly Related Information

Brisco, N. A., Retail Salesmanship Source Book, Ronald Press 1932

Brisco, N. A., Griffith, Grace and Robinson, O. P., Store Salesmanship, Prentice-Hall, 1932

Chapman, Paul, Occupational Guidance, Turner and Smith, 1937

Charters, W. W., How to Sell at Retail, Houghton-Mifflin Company, 1930

Cornell, W. B., and McDonald, John, Business Organization and Practice, American Book Company 1936

Crabbe, E. H. and Slinker, C. D., General Business, Southwestern Publishing Company, 1936

Crabbe, E. H. and Slinker, C. D., General Business Training, Southwestern Publishing Company, 1925

Davis, J. J. and Wright, J. W., You and Your Job, John Wiley and Sons, 1930

Ely, J. T. A. and Starch, D. A., Salesmanship for Everybody, Gregg Publishing Company, 1936

Gavian, Ruth M., Grey, A. A., and Groves, E., Our Changing Social World, D. C. Heath, 1934.

Goss, J. E., Chats in an Employment Office, Inn Publishing Company, 1934

Grunstein, M. B. and Smithline, Henry, Our Daily Contacts with Business. Lyons and Carnahan, 1936

Hainfield, C. F. and Thorp, Earl, Secretarial Practice, Lyons and Carnahan, 1934

Jones, L. L. and Bertschi, Lloyd, General Business Science, Gregg Publishing Company, 1930

Jones, L. L. and Holtzclaw, H. F., General Business Science, Part 2. Gregg Publishing Company, 1931

Keister, A. S., Our Financial System, The McMillan Company, 1930

Kirk, John Buckley, Harold and Walsche, Mary, Introduction to Business, John Winston Company, 1938

Kitson, Harry D., I Find My Vocation, McGraw-Hill Book Company, 1937

Knox, J. S., Salesmanship and Business Efficiency, Knox Business Book Company, 1937

Lumley, F. E., and Bode, B. H., Ourselves and the World, McGraw-Hill Book Company, 1931

MacGibbons, Elizabeth Gregg, Manners in Business, The McMillan Company, 1937

Morrill, A. A. and Bessey, M. A., Walsh, J. V., Applied office Practice, D. C. Heath Company, 1931

Peters, P. B. S. and Pomeroy, D. A., Commercial Law, Southwestern Publishing Company, 1928

Prosser, C. A., and Anderson, W. A., Getting a Job, McKnight and McKnight, 1936

Prosser, C. A. and Anderson, W. A., Keeping Physically Fit, McKnight and McKnight, 1936

Prosser, C. A. and Anderson, W. A., Taking a Look at Yourself, McKnight and McKnight, 1936

Shields, H. G. and Wilson, W. H., Business Economic Problems, Southwestern Publishing Company, 1935

Vardaman, B. R. and Lovelace, G. M., Salesmanship Ib, International Textbook Company, 1937

Wallis, Grace S. and Wallis, W. D., Our Social World, McGraw-Hill Book Company, 1933

Walters, R. G., Fundamentals of Salesmanship, Southwestern Publishing Company, 1937

Walters, R. G. and Rowse, E. J., Fundamentals of Retail Selling, Southwestern Publishing Company 1938

Wheatly, W. A. and Mallory, R. R., Building Character and Personality, Grim and Company, 1936

Sanborn, K. A., Tact, Christian Endeavor, 1899

Kirk, J. G., and Woesche, Mary, Junior Training for Modern Business, John Winston, 1925

Telegraph Bulletins and Regulations, Local Telegraph Office

Post Office Bulletins and Regulations, Local Post Office

Freight and Express Bulletins and Regulations, Local Freight and Express Office

## ADDITIONAL REFERENCES USED BY THE AUTHOR IN THE WRITING OF THIS THESIS

Crawford, C. C., The Technique of Research in Education, University of Southern California Press, 1928

Reeder, Ward G., How to Write a Thesis, Public School Publishing Company, 1925

Whitney, F. L., Methods in Educational Research, D. Appleton-Century Company, 1931

Number_____ Name_____

School_____

City_____

Occupation_____

Job Details_____

Specifying_____

Nature of Job_____

Special Tools_____

Or Equipment_____

Needed or Used_____

Questions:

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

References and_____

Suggestions for Study_____

Typed by:

Winnifred Vogler