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STATE OF ALASKA  
PRELIMINARY STATEMENT OF FISCAL IMPACT

**RECEIVED**  
MAR 2 1983

Bill No: HB 54 Date on Bill: 1/18/83  
 Title: Relating to regulations adopted under the Administrative Procedure  
 Sponsor: Act (AS 44.62) and providing for an effective date  
 Requestor: \_\_\_\_\_

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

			FY 83	FY 84	FY 85	FY 86		
Capital								
Operating			0	0	0	0		
Total								

b. Revenues:

Revenue								
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2. Source of funds to offset fiscal impact of bill:

3. Assumptions:

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor.

Prepared By: *Arnold C. Beach* Phone: 465-2201  
 Division: Deputy Commissioner of Administrative Management Date: March 2, 1983  
 Approved by Commissioner: *Arnold C. Beach for* Date: March 2, 1983  
 Department: Department of Administration

5. Distribution:

- Original to Legislative Finance
- Copy to OMB
- Copy to Sponsor
- Copy to Requestor

2/8/83



# Alaska State Legislature

## House of Representatives

### Committee on State Affairs

Pouch V.  
State Capitol  
Juneau, Alaska 99811

Official Business

#### AGENDA

DATE: 3/2/83

TIME: 1:00 p.m.

- I. Call meeting to Order
  - A. Note the committee members present.
  - B. Welcome those observing the meeting.
  - C. Remind those who have not signed in to do so. And remind those giving testimony to speak up and state their name before talking.

#### II. Announce ~~legislation~~ legislation under consideration:

HCR 18 - Relating to displaying the flags of the US of America and the State of AK

HB 54 - An act relating to regulations adopted under the administrative procedures Act AS 44.62.

HB 106 - An act relating to bidder preference.

*Whitch: Rep. Leard needs to testify first in order to return to the Finance Committee meeting. (HB106)*

#### Other notes or reminders:

Susitna hearings will continue tomorrow in State Affairs

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# STATE OF ALASKA

Bill Sheffield, Governor

## DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

POUCH K - STATE CAPITOL  
JUNEAU, ALASKA 99811  
PHONE: (907) 465-3600

March 2, 1983

Honorable Mitchell E. Abood, Jr.  
Chairman, House State Affairs Committee  
Alaska State Legislature  
Pouch V  
Juneau, Alaska 99811

Re: HB 54 (regulations adopted  
under the Administrative  
Procedure Act)

Dear Mr. Abood:

In line with the first section of this bill, the Department of Law wholeheartedly supports the idea "that regulations adopted, revised or amended under the Administrative Procedure Act (AS 44.62) be simple, clear, understandable, and easily readable." However, we oppose this bill.

The heart of this bill is, of course, in its section 4, which would require the application of the Flesch "reading ease test" to administrative regulations adopted under the Alaska Administrative Procedure Act. That test is derived from a part of the "readability formula" developed by Dr. Rudolph Flesch in the 1940's. See his The Art of Plain Talk (Harper & Row, Publishers, 1946) and The Art of Readable Writing (Harper & Row, Publishers, 1949). In his preface to the second book, Dr. Flesch states

. . . I can only repeat what I said in the preface to The Art of Plain Talk: "Some readers, I am afraid, will expect a magic formula for good writing and will be disappointed with my simple yardstick. Others, with a passion for accuracy, will wallow in the little rules and computations but lose sight of the principles of plain English. What I hope for are readers who won't take the formula too seriously and won't expect from it more than a rough estimate." [Emphasis added.]

Dr. Flesch himself recognized that, while such a formula can be useful in helping sensitize a writer to certain elements of his writing, it should not be rigidly applied or overemphasized. This bill does just that. Under section 2 of the bill, an administrative regulation, no matter how essential to the wellbeing of the state and no matter how easily understood by the portion of the public governed by that regulation, would be invalid if it does not achieve a certain score on the Flesch reading ease test. Conversely, a regulation could satisfy the requirements of the proposed statute, by containing simple

sentences and words of few syllables, and still be pure gibberish.

The proposed AS 44.62.055(a)(4) requires counting words and syllables only for a regulation containing 10,000 words or less. That would be virtually every regulation. That means that someone in the Department of Law serve as a word and syllable counter, since it is this department that is responsible for assuring the legality of administrative regulations (AS 44.62.060). That does not seem to be a productive use of staff time. A regulation drafter, whether or not an attorney, should be aware of such things as sentence and word length as well as the many other things discussed so well by Professor Reed Dickerson in his The Fundamentals of Legal Drafting (Little, Brown & Co., 1965).

Professor Dickerson's book has served as the basic reference work for both legislative and regulation drafting in Alaska for many years. In a 1980 article, Professor Dickerson points out, with regard to sentence length, that "the psycholinguists recently confirmed the fact that because the structure of an unavoidably complicated idea is normally hierarchical, it is better grasped if framed in sentences long enough to accommodate appropriate clauses and subclauses than if chopped up into short sentences whose interrelationships are accordingly obscured." Plain English in a Complex Society (The Poynter Center, Indiana University, April 1980). That, itself, is a rather long sentence, but its meaning seems quite clear and the professor's point is certainly valid.

It is a coincidence that section 3 of this bill, requiring the Drafting Manual for Administrative Regulations to consider the requirements of the proposed Flesch-test section, appears at this time. The Department of Law is currently in the final stages of preparing the 8th edition of the Drafting Manual for Administrative Regulations, and a new Chapter 20 mentions Dr. Flesch and his readability formula. A copy of that Chapter 20 taken from the final (but not yet proof-read) draft of the 8th edition is attached, for your convenience.

Two other points: (1) it is not clear why only medical terminology has been singled out (page 3, line 16) as a particular kind of technical terminology to be excepted from the definition of "text." (2) Proposed AS 44.62.055(c) and (d) (page 3, lines 21 -- 27) assign duties to the commissioner of administration. Currently, that commissioner has no role under the Administrative Procedure Act, and it would be more appropriate to assign the two functions mentioned there either to the Department of Law or the Lieutenant Governor's Office.

The bill's concern with clear writing of administrative regulations is commendable. However, it does not appear that a

Honorable Mitchell E. Abood, Jr.  
Chairman, House State Affairs Committee

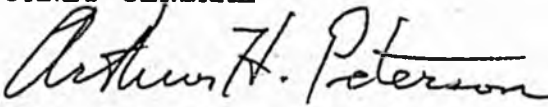
March 2, 1983  
Page 3

rigid use of the Flesch test (or some other such approach) will assure clear writing, and this bill appears likely to cause more problems than it will solve.

Thank you for this opportunity to comment.

Yours truly,

NORMAN C. GORSUCH  
ATTORNEY GENERAL

By:   
Arthur H. Peterson  
Assistant Attorney General

AHP:md

cc: Hon. Walt Furnace  
House of Representatives  
Alaska State Legislature

Emil Notti, Legislative Assistant  
Office of the Governor

CHAPTER 20. PLAIN ENGLISH.

In writing regulations, use "plain English." Legislation has been introduced in Alaska and has been enacted in some states (e.g., Connecticut, Massachusetts, New York) requiring certain legal material to be written in plain English. President Carter's Executive Order No. 12044 (March 23, 1978) included a provision requiring officials to determine that their regulations are "written in plain English and . . . understandable to those who must comply with [them]."

Obviously, people will disagree as to what that means. Much has been written on the subject. For the purposes of this manual, the admonition to use plain English should be taken in much the same vein as Edwin Newman's advice to use a "civil tongue."

A civil tongue . . . means to me a language that is not bogged down in jargon, not puffed up with false dignity, not studded with trick phrases that have lost their meaning. It is not falsely exciting, is not patronizing, does not conceal the smallness and triteness of ideas by clothing them in language ever more grandiose, does not seek out increasingly complicated constructions, does not weigh us down with the gelatinous verbiage of Washington and the social sciences. It treats errors in spelling and usage with a decent tolerance but does not take them lightly. It does not consider "We're there because that's where it's at" the height of cleverness. It is not merely a stream of sound that disk jockeys produce, in which what is said does not matter so long as it is said without pause. It is direct, specific, concrete, vigorous, colorful, subtle, and imaginative when it should be, and as lucid and eloquent as we are able to make it. It is something to revel in and enjoy.

From A CIVIL TONGUE, copyright  
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Newman, used with permission  
of the publisher, The Bobbs-  
Merrill Company, Inc.

While administrative regulations are rarely "colorful," Mr. Newman's point is well taken. They should be direct, specific, concrete, etc. It is necessary to think about each word that is written. For regulations as for statutes, the potential for administrative difficulties, public confusion, and litigation --

all stemming from careless drafting -- must be borne in mind. This is a matter of what may be called "substantive clarity" -- the logical organization and accuracy of the writer's thought and of the expression of that thought.

In addition, it is necessary to consider how clearly or easily that thought is likely to be understood by a particular reader or class of readers. Regulations should be written for two audiences: (1) that portion of the public who will be governed by the regulations, and (2) the general public. As part of the law of the state, regulations should be written in a style that can be readily understood by people of fairly widely varying educational backgrounds. They should not be written as part of an esoteric realm accessible only to some highly educated or governmental elite. However, this does not mean that a set of commercial banking regulations, for example, should be written at an eighth-grade level. The primary focus should be on the persons governed by the regulation. The standard is flexible. Balance and good judgment are required.

Legal writing will sometimes deal with complicated concepts. Nevertheless, the drafter's words and writing style should be geared toward expressing those concepts as simply, clearly, and accurately as possible. Typically, the substance of a regulation is the source of much dispute. A jargon-laden, "governmental" writing style can cause confusion and resentment; it should be avoided.

A widely used State of Alaska form, revised in 1980, retained the following language (immediately after providing a blank for a land description):

Together with, all and singular, the tenements, hereditaments, and appurtenances thereunto belonging or in anywise appertaining, . . .

Not even in legal writing is there any longer a justification for that sort of archaic, redundant jargon. While its origins may be described, whatever value it may once have had is overwhelmed by the problems it creates in current writing. Whoever approved that form in 1980 simply did not think about all of the words he or she was using. Equally importantly, that language does not show any concern about the comprehension level of the people using that form.

In 1946, Rudolf Flesch wrote The Art of Plain Talk (Harper and Row, Publishers), in which he developed a statistical formula for measuring "readability." By finding average sentence length and

proceeding through some additional steps, use of Dr. Flesch's formula tells a writer where the writing stands on a scale ranging through seven steps from "very easy" (e.g., comic books) to "very difficult" (e.g., scientific journals). Dr. Flesch's The Art of Readable Writing (Harper and Row, Publishers, 1949) offered a revised version of his readability formula, and he cautioned readers of his books not to expect more from the formula than a rough estimate. It is simply an attempt to provide some sort of objective measurement of readability.

More recently, computers have been used to assist in that kind of statistical or objective approach. An oversimplified statement of its basic premise might be "The longer the sentences, and the longer the words; the harder it will be to understand the writing." A writer's use of the Flesch formula or of a computer or of some other readability analysis certainly does not guarantee good writing. It does not even guarantee easily understood writing. But one who is aware of the factors discussed by Dr. Flesch has some guidance in producing writing that ought to be understood by the appropriate reading audience.

As indicated in the long quotation at the beginning of this chapter, it is also necessary to think about the precision of each word itself. Four relatively recent and popular books that emphasize the precision that is available in the English language are: Edwin Newman's Strictly Speaking (Warner Books, 1975) and A Civil Tongue (Warner Books, 1977); William Safire's On Language (Avon, 1981); and John Simon's Paradigms Lost (Clarkson N. Potter, Inc./Publishers, 1980). With varying degrees of dogmatism and humor, these books help sensitize one to the appropriate uses of words and phrases.

Those authors criticize errors in punctuation and word usage that they have observed in the press, in television commercials, in everyday social exchanges, and in a variety of other sources. This criticism emphasizes the need to adhere to standards of "correctness" while not freezing the development of the language. And it emphasizes the obvious need to avoid the thoughtless use of a language that, if used with care, can provide very accurate communication.

This manual will not attempt to offer a bibliography of books and articles on legal drafting or other kinds of writing. However, two classic reference works must be mentioned: H. W. Fowler's A Dictionary of Modern English Usage (Oxford University Press, 2d ed., 1965); and William Strunk, Jr., and E. B. White's The Elements of Style (Macmillan Publishing Co., Inc., 3d ed., 1979). In addition, Margaret Nicholson's A Dictionary of American English Usage (Signet, 1958) can be useful (although it is now out of print). The Fowler book and the Nicholson book (based on

the first edition of Fowler) provide dictionary entries, often extending to brief essays, on such things as split infinitives and the distinction between the proper uses of "which" and "that." A basic characteristic of Fowler is mentioned by the editor in the preface to the second edition:

[H]e never forgot what he calls "that pestilent fellow the critical reader" who is "not satisfied with catching the general drift and obvious intention of a sentence" but insists that "the words used must . . . actually yield on scrutiny the desired sense." [Footnote omitted.]

The Strunk and White book sets out rules, examples, and discussion, in a very few pages. It provides what White calls (in his introduction to the third edition) a "summation of the case for cleanliness, accuracy, and brevity in the use of English."

A discussion of legal writing has to include mention of Reed Dickerson's The Fundamentals of Legal Drafting (Little, Brown and Co., 1965), referred to at several places in this manual: Through logic, humor, and a very "readable" writing style, Professor Dickerson provides guidance and insight. One can use his book for its "do" and "don't" rules (such as some of those in Chapter 15 of this manual) as well as for its solution of various kinds of language puzzles that appear in legal drafting (such as semantic and syntactic ambiguities, logical fallacies, and distinguishing the appropriate use of vagueness). His explanations and advice help one's thinking and one's writing.

The purpose of this little chapter is to stress the importance of the writing of regulations and to suggest just a few basic books that will help in the effort. Most of the rest of this manual deals with substantive issues and procedural requirements. However, if the language used is not carefully selected to help assure clear thinking and to help assure that the concept in the writer's mind is likely to be the same concept that the reader derives from the writing, the attention devoted to those issues and requirements may well have been wasted. Not only that, the administrative problems, public confusion, and litigation that might result could be very expensive. A regulations drafter is writing law. That is not something that can be done with abandon.

## CHAPTER 21. SECRETARIES' SUMMARY.

### A. Introduction

HB 54

Page 1 line 15 What are words of art?

Refer to the fiscal note from the Dept. of Law:

The department of law recommends that the power to authorize a lower Flesch score when such a lower score is necessary to prevent substantive misinterpretation of a statute be vested in either the Attorney General or the Lt. Governor and NOT the Commissioner of Administration.

Wouldn't the Attorney General's office be the most reasonable place to guard against any substantive misinterpretation of a statute?

*Please  
circled*

~~Also, please note the appearance of several typos on:  
page 3 lines 21;22;24;25 the words "commissioner" and "administration."  
My office has notified the Chief Clerk of the engrossing errors and ~~it~~ they  
will be corrected in the next printing.~~

STATE OF ALASKA  
PRELIMINARY STATEMENT OF FISCAL IMPACT

Bill No: HB 54 Date on Bill: 2/9/83  
 Title: "An Act relating to regulations adopted under the Administrative Procedure Act (AS 44.62):  
 Sponsor: House State Affairs Committee  
 Requestor: House State Affairs Committee  
and providing for an effective date."

1. Estimated fiscal impacts on:

a. Expenditures:

(Thousands of Dollars)

			FY 83	FY 84	FY 85	FY 86		
Capital								
Operating			7.3	50.6	53.6			
Total			7.3	50.6	53.6			

b. Revenues:

Revenue								
---------	--	--	--	--	--	--	--	--

2. Source of funds to offset fiscal impact of bill:

No information provided.

3. Assumptions:

Each year the Department of Law reviews and assists in the preparation of approximately 150 separate sets of regulations adopted under the Administrative Procedure Act. The department agrees fully with the purpose and intent of the bill, which is that the state's regulations be simple, clear, understandable, and easily read. The department's drafting manual for administrative regulations and its civil division law office manual both stress the importance of simplifying legal writing, through example and instruction. Due to the large number of regulations being reviewed by the department, and their varied

4. Disclaimer:

This statement has not been reviewed by the OMB in the Office of the Governor. It does not represent the policy of the Sheffield Administration or the final estimate of fiscal impact.

Prepared By: Richard I. Pegues Director Phone: 465-3672  
 Division: Administrative Services Date: 2/10/83  
 Approved by Commissioner: Norm C. Saul Attorney General Date: 2/10/83  
 Department: Department of Law

5. Distribution:

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2/8/83

FISCAL ANALYSIS

HB 54

Page 2

scope and nature, it will be necessary to add a new and ongoing level of examination during the review process. Consequently, resources made available to the department must be increased to add attorney supervised staff who will be responsible for insuring that regulations comply with a "Flesch reading ease" type test.

The department notes that proposed Sec. 44.62.055(d) would empower the Commissioner of Administration to authorize a lower score when such a lower score is necessary to prevent substantive misinterpretation of a statute. The department recommends that this power be vested in either the Attorney General or the Lieutenant Governor rather than the Commissioner of Administration. Adding a new player to an already complicated game, one that we are all trying to simplify, will probably complicate the process further.

Words

Syllables

<u>9</u>	(c) It shall be the duty and responsibility of all	<u>14</u>
<u>7</u>	physicians licensed to practice medicine in the	<u>13</u>
<u>9</u>	State of Alaska who are in attendance or any	<u>13</u>
<u>8</u>	physician who by virtue of his appointment as	<u>13</u>
<u>7</u>	medical examiner or local health officer shall	<u>15</u>
<u>8</u>	have knowledge or suspect that a person has	<u>11</u>
<u>7</u>	died of a communicable disease which may	<u>12</u>
<u>8</u>	reasonably constitute a threat to the health of	<u>15</u>
<u>6</u>	morticians and their staffs, village officials,	<u>11</u>
<u>7</u>	clergymen, and all others involved in the	<u>11</u>
<u>8</u>	handling and preparation of a dead human body,	<u>12</u>
<u>7</u>	to inform and counsel such individuals promptly,	<u>13</u>
<u>9</u>	of this hazard or potential threat to their health	<u>13</u>
<u>5</u>	and safety. Appropriate precautionary measures	<u>13</u>
<u>7</u>	to prevent the spread of communicable diseases	<u>13</u>
<u>7</u>	from deceased human bodies to employees of	<u>12</u>
<u>5</u>	mortuary establishments, persons contracted to	<u>13</u>
<u>7</u>	provide services involved in the preparation and	<u>14</u>
<u>8</u>	handling of dead human bodies, and to the	<u>11</u>
<u>8</u>	general public, shall be undertaken at all times	<u>14</u>
<u>8</u>	and shall be the responsibility of the funeral	<u>13</u>
<u>8</u>	director, or in his absence, the senior village	<u>13</u>
<u>2</u>	official present.	<u>5</u>

Total 165

287 Total

SENTENCES = 2



ALASKA STATE LEGISLATURE  
HOUSE OF REPRESENTATIVES  
RESEARCH AGENCY

Pouch Y, State Capitol  
Juneau, Alaska 99811  
(907) 465-3991

January 31, 1983

MEMORANDUM

TO: Representative Walt Furnace  
Attention: Jeff Barry

FROM: Christine Johnson, Research Staff

RE: Readability Formulas  
Research Request No. 83-1

Jeff Barry of your staff has asked for a description of the formulas which are used to test the "readability" of written material. There are many readability formulas, although six are most commonly used. A brief description of these six tests is attached. We have also enclosed some material prepared by the National Conference of State Legislatures (NCSL) regarding "plain language laws" in other states. States which require that contracts, insurance policies, etc., be subjected to a readability test generally specify the Flesch readability formula.

All readability tests determine the reading level of a document based on (a) the difficulty of the vocabulary and (b) the complexity of the sentence structure. They generally judge the complexity of vocabulary by the number of syllables per word. Several formulas also have their own vocabulary lists of "familiar" words. Written material which has a large percentage of words not on these lists is considered more difficult to read. The formulas determine the complexity of sentences based on the average number of words per sentence.

Readability formulas differ in the types of material they are designed to evaluate and in the ease with which they are applied. The table on the following page shows the grade levels for which each test is suited. The American public reads at roughly a junior high school level; newspapers are written at a sixth to seventh grade reading level.

As you can tell from the information we have attached, it does not require any specialized training to use the readability formulas. It can, however, be time consuming to count the number of words in sentences, the number of syllables per word, etc. The Spache and the Dall-Chall formulas are the most complicated and time consuming to use as each word in a document must be looked up on the word list. Readability formulas which can instantly test the reading level of a document are available on the software for many brands of word processors. The more sophisticated programs will automatically display

alternatives to words in the document which are above the desired reading level. We have enclosed a description of the readability formulas available for Wang word processors for your information.

We hope this information is of use to you. If you would like any additional information on this topic, please don't hesitate to contact us.

Six Most Common Readability Formulas

Grade Level for which Test is Suited

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>College</u>	<u>Professional</u>
Spache	1	-----		4										
Dale-Chall					5	-----							College	
Fry	1	-----											College	
Raygor				4	-----								Professional	
Flesch								8	-----				College	
Gunning-Fog								8	-----				College	

Source: Alaska Department of Education, Office of Educational Technology and Telecommunications.

## Descriptions of the Six Most Common Readability Formulas

1. The Spache Formula
2. The Dale-Chall Formula
3. The Fry Formula
4. The Raygor Formula
5. The Flesch Formula
6. The Gunning-Fog Formula

## SPACHE READABILITY FORMULA

The Spache Formula was developed to determine the readability of written materials for grades 1 - 4. The steps used in evaluating selections are presented below.

1. Count the number of words
2. Count the number of sentences
3. Count the number of words not on the Spache Word List
4. Find the average sentence length by dividing number 2 by number 1.
5. Divide number 3 by number 1 and multiply by 100.
6. Multiply number 4 by .121
7. Multiply number 5 by .082
8. Add number 6 and number 7 plus a constant .659 to obtain the grade level.

This outline of the Spache test is given so the reader will know how the formula is calculated. It is not intended to be complete. For the word list, and further details, see Appendix C, Reference 8.

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## DALE-CHALL FORMULA

One of the most commonly known and widely used formulas for determining the reading level of printed materials is the "Dale-Chall Formula". This formula is based on two counts: average sentence length and percentage of unfamiliar words. This formula is used extensively in the elementary field to evaluate vocabulary in textbooks. However, the range and vocabulary in senior high school books makes this formula somewhat impractical for that level. The steps used in evaluating written selections are presented below:

1. Count the number of words in the sample;
2. Count the number of sentences in the sample;
3. Count the number of words not included in Dale's list of 3000 words;
4. Divide the number of words by number of sentences to obtain the average sentence length;
5. Divide the number of words not on Dale's list of 3000 words by the total number of words in the sample;
6. Multiply the average sentence length by .04696;
7. Multiply the Dale score by .1579;
8. Add the results from steps 6 and 7 to a constant (3.6365) to obtain the formula raw score;
9. Convert to a readability score by the use of the following conversion table:

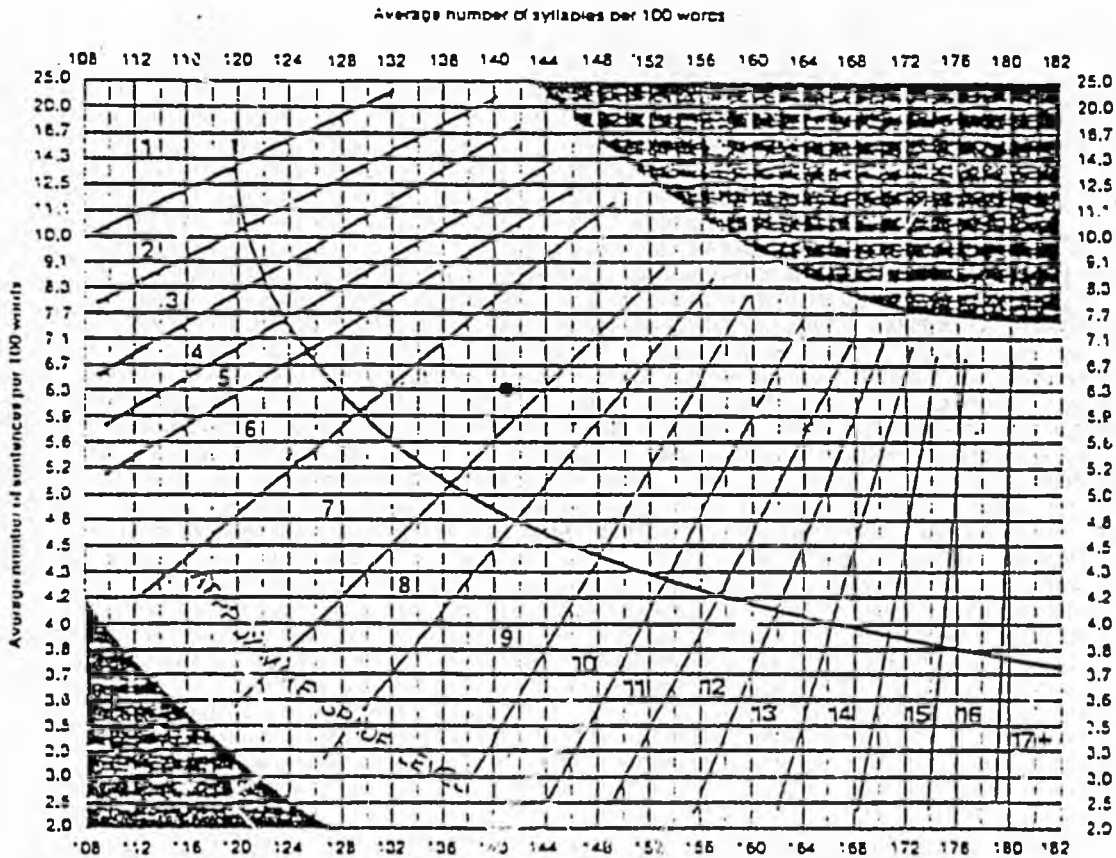
<u>FORMULA SCORE</u>	<u>CORRECT GRADE LEVELS</u>
4.9 and below	Grades 4 and below
5.0 to 5.9	Grades 5 and 6
6.0 to 6.9	Grades 7 and 8
7.0 to 7.9	Grades 9 and 10
8.0 to 8.9	Grades 11 and 12
9.0 to 9.9	Grades 13 - 15 (College)
10.0 and above	Grades 16 - above (College Grad)

This description of the Dale-Chall test is given so the reader will know how the formula is calculated. It is not intended to be complete. For the word list, and further details, see Appendix C, Reference 1.

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# FRY READABILITY ESTIMATE

by Edward Fry, Rutgers University Reading Center, New Brunswick, N.J. 08904



**Directions:**

Randomly select three one hundred word passages from a book or an article. Plot average number of syllables and average number of sentences per 100 words on graph to determine the grade level of the material. Choose more passages per book if great variability is observed and conclude that the book has uneven readability. Few books will fall in the gray area but when they do, grade level scores are invalid.

Count proper nouns, numerals and initializations as words. Count a syllable for each symbol. For example, "1945" is 1 word and 4 syllables and "IRA" is 1 word and 3 syllables.

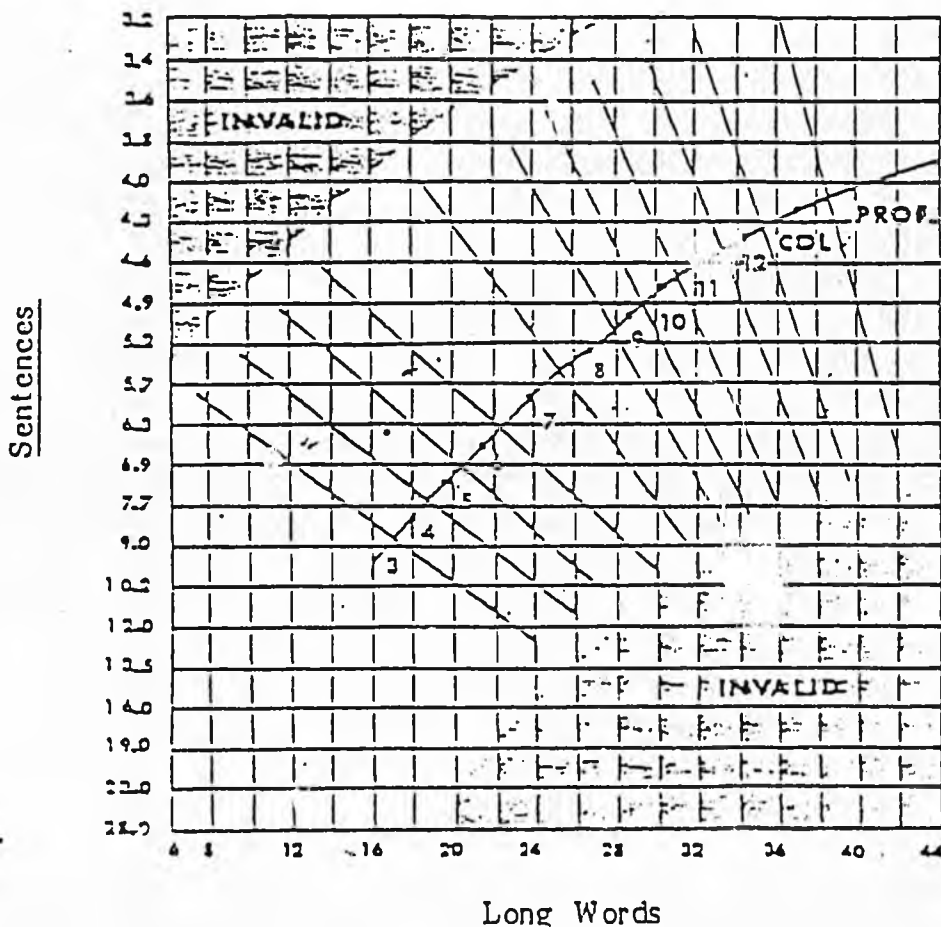
**Example:**

	<u>SYLLABLES</u>	<u>SENTENCES</u>
1st Hundred Words	124	6.6
2nd Hundred Words	141	5.5
3rd Hundred Words	158	3.8
AVERAGE	141	6.3

READABILITY 7th GRADE (see dot plotted on graph)

# THE RAYGOR READABILITY ESTIMATE

ALTON L. RAYGOR - UNIVERSITY OF MINNESOTA



**Directions:**

Count out three 100-word passages near the beginning, middle, and end of a selection or book. Count proper nouns, but not numerals.

1. Count words with six or more letters (long words).
2. Count sentences in each passage, estimating to nearest tenth (sentences).
3. Average the sentence length and word length over the three samples and plot the average on the graph.

**Example:**

	Long Words	Sentences
A	15	6.0
B	19	6.8
C	17	6.4
Total	51	19.2
Average	17	6.4

Note mark on graph. Grade level is about 5.

## FLESCH FORMULA

The Flesch formula is based to compute scores for "reading ease" and "human interest". Although this method has been criticized, no better system seems to have been developed to this time for quick evaluation of adult reading materials. Flesch has a chart inside the cover of his book, The Art of Readable Writing, which is a short-cut to determining readability and will eliminate the need to compute the formula. This chart can be used in place of steps 6 and 7 in the procedure outlined below. For those who do not have access to his book, the procedure he follows to determine readability is:

1. Count the words in the article (mark each 50th word).
2. Count the sentences.
3. Count the syllables in the article.
4. Divide the number of words by the number of sentences to obtain the average sentence length.
5. Divide the number of syllables by the number of words and multiply by 100 to obtain the average number of syllables per 100 words.
6. Multiply the average sentence length in words by 1.015.
7. Multiply the average number of syllables per 100 words by .846, then add the totals of steps 6 and 7, then subtract the total from 206.835 to obtain the readability score for the article.
8. Convert the readability score to reading ability level given below to determine usability.

### READABILITY

80 - 70  
70 - 60  
60 - 50  
50 - 40  
40 - 30  
30 - 20

### READING ABILITY LEVEL

7th and 8th grades  
9th and 10th grades  
11th and 12th grades  
College Freshman to Juniors  
College Seniors  
College Graduates

## GUNNING-FOG FORMULA

The Gunning-Fog Formula was developed to determine the readability of magazine articles. The steps used in evaluating articles are presented below:

1. Count the number of words
2. Count the number of sentences
3. Count the number of hard words
4. Find the average sentence length by dividing number 2 by number 1.
5. Multiply the percent of hard words (number 3) by number 1 times 100.

### Fog Index

$$\text{Total } (4+5) \times .4$$

This outline of the Gunning-Fog formula is given so the reader will know how the formula is calculated. It is not intended to be complete. For further details, see Appendix C, Reference 4.

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## GENERAL DESCRIPTION (Continued)

### Why Results Of Tests May Vary

Grade levels predicted for a book based upon a large number of 100 word samples was found to have a normal distribution. Several passages from a book may differ by several grade levels because, individually, the passages are not representative of the whole book. It is important, therefore, to use an average of three or more passages to obtain an accurate estimate of reading level.

Results obtained by the various tests applied to a given book or passage may differ because of the measures used as predictors and the criteria by which the methods were validated.

All methods in School Utilities Volume 2 are based upon a measure of vocabulary difficulty and a method of sentence structure complexity as predictors. However, the various methods arrive at these measures in different ways.

Sentence length is the predictor of sentence structure complexity for all the methods in School Utilities Volume 2, but the weight given to this predictor varies from one method to the next.

Several measures are used to predict vocabulary difficulty which accounts for most of the variance between the grade level results in the various methods. For example, there are quite a number of words with three or more syllables that appear on the Dale list of "familiar" words. These familiar words are counted as difficult by methods which employ syllable counts. The word list methods of Dale-Chall and Spache have proven to be more accurate.

Another cause of differences in results is the criterion used to validate each of the methods. The Spache method was validated against the grade level of basal reader series. Most other measures predict the grade level required to score 50 percent correct on the multiple choice comprehension tests used by McCall and Crabbs in their Standard Test Lessons in Reading.

It is important to keep in mind that readability formulas only predict the probable grade level. However, as Edward Fry has said, "high motivation can overcome high readability level, but low motivation demands a low readability level." ("Fry's Readability Graph", Journal of Reading, 21, December 1977, pp. 242-251.)

# Unanimous Declaration of the Thirteen United States of America

*When in the course of human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of Nature, a new and separate form of government, the solemn obligations of the former are dissolved, and the rights of the former are transferred to the latter. In the Declaration of Independence, the Thirteen United States of America, in their capacity of a united people, declared that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.*

## STATE LEGISLATIVE REPORT

An Information Service of the National Conference of State Legislatures — Earl S. Mackey, Executive Director

Vol. 4, No. 3

July 15, 1979

### LEGISLATION REQUIRING PLAIN LANGUAGE

#### ISSUE DEFINITION

Many legal documents, especially contracts and insurance policies, awkwardly like this first sentence often read. As part of a general dislike for cumbersome language and as part of renewed interest in consumer protection, several states have passed legislation requiring use of "plain language" in consumer agreements. The purpose behind these "plain language laws" is to make legal documents simpler and understandable to the average person -- a good few would dispute. The laws themselves, however, have been subject to a continuing controversy in the state legislatures because of their vagueness, the influential interests that often oppose them, and the effects of such legislation on the body of contract law.

#### BACKGROUND

In the late 1960s and 1970s members of the consumer movement expanded their attack on what they saw as attempts by business interests to bilk consumers through the design of unreadable contracts for goods and services. The image was one of the business representative who presented the consumer with a multi-page contract, written in small print and a strange hand. Even if the consumer were not intimidated by the mere appearance of the document, the contorted language would prevent this average person from understanding the terms of the agreement.

To remedy the situation, consumer advocates (and others who were interested simply in the preservation of the English language) created a drive to have certain consumer contracts written in plain, easy-to-understand language. The purpose behind this effort was succinctly stated in the Maine bill (Legislative Document 1634) which stated that the "purpose of this chapter is to enable the average consumer, who makes a reasonable effort under ordinary circumstances, to read and understand the terms of loan documents without having to obtain the assistance of a professional".

When the Citibank of New York simplified its consumer loan forms, it gave credence to the argument that such simplification was practical. Moreover, various political candidates

- and officeholders moved in the mid-seventies to make government documents more readable. Chief among these disciples of readability was President Jimmy Carter who issued an Executive Order in 1977 insisting on understandable language in federal regulations.

At about the same time, the New York legislature passed an amendment to that state's general obligations law. This "Sullivan Law" (named after its sponsor, Assemblyman Peter M. Sullivan), as amended in 1978, became the model for a groundswell of legislative concern and action in the area of consumer contract and insurance policy readability.

The plain-language laws usually require consumer contracts, loan agreements, and insurance policies to contain simplified language that the "average person" can understand. In many instances the laws pertain only to contracts involving no more than \$50,000, and they frequently set penalties in the range of \$50 for violation of the plain language requirements. The aggregate liability of a person who originates a document in violation of a plain language law -- in the event he or she is sued in a class action--is usually set at \$10,000. Plain-language laws rarely render the document void simply because it does not meet the plain-language requirements; they simply penalize the originator of the document.

The laws are usually met with a swirl of controversy. Proponents of plain-language laws frequently cite the following arguments in their support.

1. The average consumer cannot understand most contracts and insurance policies without assistance from legal counsel. Since few consumers are willing to take every insurance policy, loan agreement, and lease to an attorney because of the time and expense involved, they often enter binding arrangements without understanding the full implications of their signatures. Plain-language requirements for these documents would protect the consumers and make it possible for them to read and evaluate their own business transactions.
2. Some academicians and journalists complain that the English language is often mutilated in contracts, insurance policies, and other documents covering the exchange of goods and services. Plain-language laws are one method by which public officials can be restrained from inflicting further damage on the language.
3. Anything that can be written in complicated, difficult, and generally tortuous English can be written in plain English. Simply by taking the time and effort to guarantee understandable language in public records and private contracts, government and business can become more democratic, open, and understandable to the general public.

Opponents of the plain-language movement usually grant the good intentions of the movement's members, but argue that problems surround the execution of these laws.

1. No one knows what language is sufficiently "plain". What might be plain language to one person, might be confusing, vague, or misleading to another.
2. The enforcement costs will be high. They will involve not only the expense to private firms of designing and printing new forms, but also administrative and investigative costs for government.

3. The government will also incur substantial costs in prosecuting violators. Current contracts and policies have been developed through thousands of court cases. Introduction of an entirely new language structure will require much of that litigation to commence again as new, precise meanings are given to the altered vocabulary in contracts and insurance policies. The only people likely to benefit from this need for litigation will be the attorneys involved in the suits.
4. The requirements for plain language in contracts and insurance policies will create the potential for a tremendous number of interstate conflicts and state-federal conflicts, as each state develops different document forms based on different models of plain-language law. It is even possible that some stringent state plain-language laws might be questioned as unlawful restrictions on interstate commerce if they severely hamper the ability of a firm in one state to conduct business in another state.

Even as the pros and cons of plain language requirements for consumer agreements grow and intensify, however, the drive for plain language has spread to areas other than consumer protection. Just as President Carter has asked federal bureaucrats to write rules and regulations in understandable terms, state legislatures have considered bills and memorials to require the same standards in their own halls and in the state bureaucracies.

#### STATE LEGISLATION

Since the enactment of the Sullivan law in New York, the idea of plain language requirements has become popular in state legislatures. A 50-state survey by NCSL in June of this year indicated that over half the states had passed plain-language laws or had them introduced in the past two years. Below is a list of states that reported recent activity in this area:

Arkansas	Iowa	Minnesota	North Carolina
Arizona	Illinois	Mississippi	North Dakota
California	Kentucky	Nebraska	Ohio
Colorado	Kansas	Nevada	Oregon
Connecticut	Maine	New Jersey	Rhode Island
Delaware	Maryland	New Mexico	South Carolina
Hawaii	Michigan	New York	Vermont
			Washington
			Wisconsin

Many of this year's plain-language bills have died in committee, but some have already been passed by the legislatures and signed into law.

The approaches taken by these plain-language laws vary widely. In Rhode Island, a 1979 bill (H5820) passed containing the following language:

SIMPLIFIED COMPREHENSIVE POLICIES OF INSURANCE -- Simplified policies of insurance providing broad coverage of all or various combinations of risks may be approved by the director of business regulation and issued by insurers notwithstanding any provision of this chapter, and notwithstanding those provisions of any other law which specify the contents of insurance policies, provided that such policies contain provisions assuring to policyholders and claimants protection not less favorable than they would be entitled to under Section 27-5-3 of this chapter or a substantially similar policy which is not subject to this section.

Still another approach has been taken by the Illinois legislature in which HB305 requires:

Every written agreement entered into after June 1, 1979, for the lease of space to be occupied for residential purposes, or to which a consumer is a party wherein the money, property or service which is the subject of the transaction is primarily for personal, family or household purposes must be:

1. Written in a clear and coherent manner using words with common and every day meanings;
2. Appropriately divided and captioned by its various sections.

By far the most stringent requirement on language is set forth in states that subject insurance policies and other forms of consumer contracts to the "Flesch readability formula". At least eight states have this formula written into pending or enacted legislation. A section from the North Carolina House Bill 707, which was enacted into law, describes how this formula is applied to consumer contracts.

- (a) A Flesch scale analysis readability score will be measured as provided in this section.
- (b) For policies containing 10,000 words or less of text, the entire policy must be analyzed. For policies containing more than 10,000 words, the readability of two 200-word samples per page may be analyzed in lieu of the entire policy. The samples must be separated by at least 20 printed lines. For the purposes of this subsection a word will be counted as five printed characters or spaces between characters.
- (c) The number of words and sentences in the text must be counted and the total number of words divided by the total number of sentences. The figure obtained must be multiplied by a factor of 1.015. The total number of syllables must be counted and divided by the total number of words. The figure obtained must be multiplied by a factor of 84.6. The sum of the figures computed under this subsection subtracted from 206.835 equals the Flesch scale analysis readability score for the policy.

Most states using the Flesch readability score require a score of 40 for a document to be designated as readable.

Many of the state laws have additional requirements for the format and design of insurance policies and other contracts. Ohio's H.B. 119 carried in it the requirement that:

The agreement shall be divided in a logical manner into sections organized for orderly and understandable reading of the entire agreement. Each section shall contain an underlined, boldface, or otherwise conspicuous title or caption at the beginning that indicates the nature of the subject matter included in or covered by the section.

Oregon Senate Bill 73C contained several requirements of this type:

- (6) Have the text of the contract or policy printed in Roman type at least as

large as 10-point modern type, two points leaded;

- (7) Have margins that are adequate for purposes of readability, and have a line length of the text not exceeding four inches for a column;
- (8) Have contract section headings printed in contrasting color, typeface or size; and
- (9) Be printed so that the contrast and legibility of the ink and paper used is substantially the equivalent of black ink on white paper.

Several states' bills contained a combination of these requirements.

Legislation in Hawaii is mindful of the possibility that "plain language" and "plain English" laws are not necessarily synonymous in the United States. S.B. 48 in that state dealt with plain language in acts of the legislature, rules, and public records. A sentence from Section 3 of the bill states, "A Hawaiian word which is commonly understood may be used as a technical term in any public record". So in that state, words other than English-language words are specifically considered in one form of plain-language legislation.

As mentioned in the previous section, requirements for plain language have not remained confined to the realm of consumer protection or commercial law. States have started to consider the possibility that plain language requirements can have applications in other areas. In Wisconsin, Senate Bill 6 requires that:

The state or county, municipality, school district or other unit of government within this state may furnish a document used in a transaction between it and a consumer only if the document is coherent, written in commonly understood language, legible, appropriately divided and captioned and presented in meaningful sequence.

The bill also applies similar requirements to "every tax form, set of directions and instruction booklets relating to the imposition of personal income tax issued by the department of revenue".

Some bill drafting manuals now devote as much space to grammatical instruction as to legal requirements for bills. The Montana manual states the point behind these requirements simply and forcefully:

Bills should be written in simple, clear, and direct style, phrased for the common reader as well as for the political or legal expert...A poorly drafted, ambiguous bill will waste the time of citizens affected, confuse those charged with its administration, lead to litigation, and likely fail to accomplish the purpose of the author.

The high level of activity in the area of plain-language legislation in the past year does not necessarily mean that defeated bills from this session will be re-drafted and re-introduced next year. Nor is it certain that additional states will join the list of states active in this area. However, we are witnessing a strong current level of interest in the basic concept which underlies plain-language legislation -- that citizens should be able to read and understand the laws which govern them and the contracts which commit them to action.

## REPORTS AND PUBLICATIONS

Goldbaum, D. "Insurance Policy Readability Laws," Ohio Legislative Service Commission, Service Commission, May 8, 1979. (Available through NCSL's Legislative Information System. Document RCH7903353.)

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Havemann, J. "The Headache of Writing Regulations in a New Language," National Journal, November 12, 1977, pp. 1769-1771.

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"Flaws are Seen in Simple English Legislation," La Crosse (WI) Tribune, February 2, 1979.

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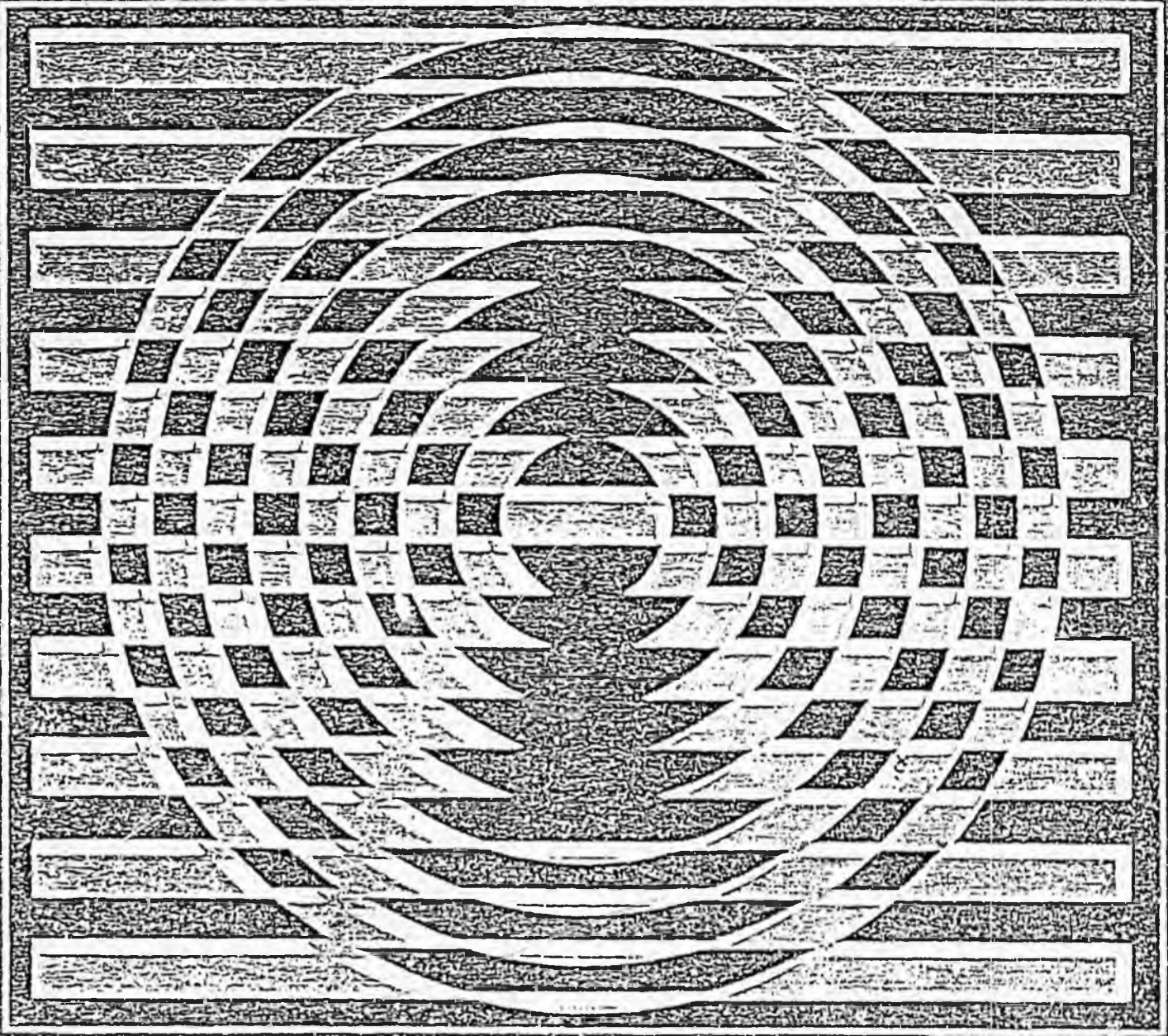
"Plain Language Law in Connecticut," New York Times, July 8, 1979.

"Plain Language Law in New York," New York Times. May 2, 1978.

The Alliance of American Insurers Public Relations Committee presents its Fifth Annual Conference on Company Communications in New York, September 23-25, 1979. At that meeting, Alan Siegel of Siegel & Gale, Inc., will discuss the status of simplified language and plain-language policies.

NCSL maintains a file of state activity on plain language legislation and requests that state legislators and legislative staff send bill copies, updated information, and relevant reports and articles on this topic to our Denver offices, c/o Glenn Newkirk.

# OIS READABILITY INDEX USER MANUAL



OFFICE  
INFORMATION SYSTEMS



## CHAPTER 1 INTRODUCTION

### 1.1 WHAT IS READABILITY?

Some documents are easier to understand than others. We read some letters and memos once and immediately know what the writer means, while we must reread others over and over before we can understand them. What is the factor that makes the difference? The answer is "readability." Readability is the element in written material that makes it easy or difficult to read.

Since the 1920s, researchers have been developing ways to measure readability. They have devised various systems, including the Flesch Index, and the Kincaid Index (MIL-M-38784A). These indices are computed by the Readability Index on the Wang Office Information System (OIS), Models 140 and 145.

Readability is important because, in today's business world, productivity and communication are major concerns. The time spent trying to read difficult writing decreases productivity. The less time spent reading, the more productive a person can be.

### 1.2 THE PLAIN ENGLISH MOVEMENT

Federal and state laws and forms have traditionally been difficult to read. Anyone who has filled out a tax return knows that. Yet tax forms are only a small part of the problem. Every business must comply with a host of federal regulations, many of which carry stiff penalties if they are not adhered to. Business and government spend much time and money each year interpreting these rules.

As a result, the "plain English movement" originated. A pension reform act was passed in 1974, requiring information sent out by companies describing their pension plans and benefits be clearly understood by their employees. A year later, the Moss-Magnuson Warranty Act was passed. This law applied similar readability standards to warranties for consumer goods.

## CHAPTER 2 ABOUT THE PROGRAM

### 2.1 HOW THE READABILITY PROGRAM WORKS

The Readability Index reads a word processing document and analyzes it for reading difficulty. It analyzes documents that are not damaged, in use, or in a print queue.

The program creates a new document containing readability statistics and a list of all polysyllabic words (three or more syllables) used in the text. If specified by the user, the text of the input document is also output. The statistics indicate how easy or difficult the text is to understand.

The Readability Index gathers the following statistics and indices for each paragraph.

- . Number of words
- . Number of sentences
- . Number of syllables
- . Number of polysyllabic words
- . Average number of syllables per word
- . Average number of words per sentence
- . Kincaid Index (MIL-M-38784A)
- . Flesch Index score
- . Grade level (a Flesch Index derivative)

After each line of paragraph statistics, the Readability Index lists all polysyllabic words in the order in which they occur in the text.

At the end of each page, the program accumulates the items and prints the page totals. At the end of the document, the program accumulates all the statistics and prints the document totals.

### 2.2 COUNTING SYLLABLES, WORDS, SENTENCES, AND PARAGRAPHS

To efficiently use the Readability Index, the user should understand how the program counts syllables, words, sentences, and paragraphs. Readability tests are based on the assumption that only the "running" text, i.e., the actual text contained within paragraphs, need be tested. This program, however, tests all text including titles, headings, section and paragraph numbers, date lines, salutations, and signature lines. The decision about what constitutes running text is left to the user. By using exclusion symbols, the user can exclude any part of the text from the analysis process.

### 2.2.3 Sentences

The Readability Index uses common typing rules to determine its sentence and paragraph designations. A sentence is defined as any word or group of words ending with a period, question mark, exclamation point, colon, or semicolon.

To indicate a sentence, a period must be followed by at least two spaces (or at least one return character). If there is only one space after a period, the Readability Index does not count it as a sentence (for example, Mrs. Smith). Only one space must follow other end-of-sentence punctuation marks to indicate a sentence. The end of a paragraph indicates the end of a sentence.

A word followed by any end-of-sentence punctuation (other than a period) and a single or double quotation mark is not the end of a sentence unless the quotation mark is followed by at least two spaces or by at least one return character. Also, a word followed by a single return and no end-of-sentence punctuation does not denote an end of sentence.

If the program encounters an ellipsis (a sequence of three dots indicating missing text, i.e., "...") or more than one exclamation point or question mark in a row, the system does not count them as multiple sentences. For example, the sentence "What on earth do you mean???" is counted as one sentence.

### 2.2.4 Paragraphs

The Readability Index recognizes a paragraph when it finds one or more words followed by two or more return characters regardless of end-of-sentence punctuation (period, question mark, exclamation point, colon, or semicolon). A paragraph end is implied if a sentence ends at the end of a page, even if there are no return characters.

A word at the end of a page that is not followed by any end-of-sentence punctuation or a return character indicates that the sentence, and the rest of the paragraph, continue on the next page.

If the last word on the page is part of a sentence that continues on the next page, the program does not consider that page an end of paragraph. If a sentence carries over to the next page, the Readability Index includes the sentence's statistics on the page on which it ends. Syllable, word, and sentence counts for all complete sentences in the partial paragraph are included in the page totals for the page on which the paragraph began. The totals for the entire paragraph appear when the end of the paragraph is reached.

Thus, if there are split paragraphs in a document, the totals for the entire document will not equal the sum of the various page totals because the document totals represent the sums of all the complete paragraph statistics. Thus, accuracy is maintained at the paragraph and document level.

	[--- NUMBER OF ---]	[- AVERAGE -]	[-KINCAID-]	[- FLESCH -]
Sect.	Words	Sent	Syl	Poly- Syls/ Words/ MIL-M- Raw Grade
			syl	Word Sent 38784A Score Level
=====				

(TO: John Clark  
 FROM: Martha Johnson  
 SUBJECT: Office Information Systems Readability Index  
 DATE: September 30, 1981)

Enclosed is a demonstration of the Office Information Systems Readability Index. This demonstration should be able to be performed easily, as a result of the advanced human interface design aspects of the package.

Pr 1 33 2 62 6 1.58 16.50 13.0 31.14 16.3

POLYSYLLABIC WORDS: demonstration Information Readability demonstration easily interface

The necessity of the following software package demonstration becomes readily understandable when one investigates the series of events which have led to the development and implementation of the Pension Reform Act of 1974, the Moss-Magnuson Warranty Act of 1975, and the Presidential Executive Order 12044 in 1978. This legislation requires increased levels of readability for documentation in the insurance industry, the public sector, and the federal government.

Pr 2 67 2 134 19 2.00 33.50 21.1 3.63 20.5

POLYSYLLABIC WORDS: necessity following demonstration readily understandable investigates development implementation Moss-Magnuson Warranty Presidential Executive legislation readability documentation insurance industry federal government

PG 1 100 4 196 25 1.96 25.00 17.3 15.64 18.7

TOTAL: 100 4 196 25 1.96 25.00 17.3 15.64 18.7

```

[----- NUMBER OF -----] [- AVERAGE -] [-KINCAID-] [- FLESCH -]
          Poly-  Syls/  Words/  MIL-M-  Raw  Grade
Sect.  Words  Sent  Syl   syl  Word  Sent   38784A  Score  Level
=====

```

(TO: John Clark  
FROM: Martha Johnson  
SUBJECT: Office Information Systems Readability Index  
DATE: September 30, 1981)

Enclosed is a demo for the OIS Readability Index. This demo should be easy to run because of the human design aspects of the package.

Pr 1 25 2 39 1 1.56 12.50 7.7 62.17 9.6

POLYSYLLABIC WORDS: Readability

The need for this software package becomes clear when one learns of the events which led to the creation of the 1974 Pension Reform Act, the 1975 Moss-Magnuson Warranty Act, and the 1978 Presidential Executive Order 12044. These laws call for easy-to-read texts in the insurance industry, the public sector, and government.

Pr 2 52 2 83 9 1.60 26.00 13.4 45.41 14.2

POLYSYLLABIC WORDS: creation Moss-Magnuson Warranty Presidential Executive easy-to-read insurance industry government

PG 1 77 4 \122 10 1.58 19.25 10.6 53.25 11.9

TOTAL: 77 4 122 10 1.58 19.25 10.6 53.25 11.9