Plain Talk For Better Writing

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I'd like to make a survey. How many of you would want to sign up for a professional course in speed reading if your company paid the tuition?

Also, how many would want to sign up for a free course in grammar and composition taught by a college English teacher?

Now, what would that survey prove? It probably would show that everybody wants to read, but nobody wants to write. One reason we have to learn to read faster is because no one is learning to write better.

Perhaps I could have gotten a different answer if I had asked a question like this: How many want to sign up for a short course, on company time, that will tell you how to improve your writing habits and add $30,000 to your career earning power?

Now that's a good question, and that's the purpose of this paper: to plant the idea in your mind that better writing can reward you. It can increase your paycheck and can extend your personality. And the way to better writing is through well-reasoned "plain talk" consisting of simple words, first-person approach, facts instead of generalities, and none of the formal-paper "scientific" style.

BETTER WRITING CAN PAY

Everybody knows that engineers can't write, and that they don't usually enjoy English courses in college as much as math or engineering. But you also have to admit that the pen becomes mightier than the slide rule the further the engineer advances into management. You should recognize early in the game that good writing is part of an employee's work that counts toward advancement.

The editor of an engineering journal said, "An engineer who cannot write effectively must expect, during his working life, to earn $20-30,000 less than an otherwise qualified engineer who can write." So a price tag can be put on the value of effective writing.

I'd like to suggest how you can work toward some of this value. I can't show you exactly how to do it, because it's not easy, even for professionals. As William Faulkner said, writing cannot be taught—but it can be learned. It's like a West Texas waterflood—you've got to start putting out the investment and the effort for a while before the rewards start coming in. Good writing will pay off with a strong profit ratio and a satisfying rate of return, but you must work at it and invest some long-range effort in it.

THE PROBLEM OF FORMALITY

What is our problem in writing? I think we all reflect an attitude like the one in this story about Calvin Coolidge. He was known as Silent Cal because he wasn't a very excitable or temperamental man. After he had been President for two or three years, an old boyhood friend who was visiting him in Washington asked, "Cal, how does it feel to be President of the United States?"

Coolidge sat there for a full three-quarters of a minute before replying, "Well—you got to be mighty careful."

I believe we have this same feeling about our engineering letters—we're trying to be too cautious. Our effectiveness is actually inhibited by our inbred attempts to sound dignified, impersonal, and professional. These old habits were drummed into us by our experience with teachers in school. No one has ever told us to change, and along the way in the business world we have added the habit of not wanting to be pinned down to a definite statement. With this sort of compounded motivation, we all too often end up being pretentious, wordy, and vague in our everyday engineering memorandums. We become like a hedgehog who wants to sound as profound as possible without committing himself to a thing. It's true there are a few situations when this is a handy art to have, but it is an easy habit to fall into every day when we should be clear and forceful. As a result, we become

stuffy and vague as a regular thing, and it is not only our writing but also our thinking that suffers.

THE NEED FOR IMPROVEMENT

A writer and businessman named James Boyd once said, "I should be safe in offering to bet even money that no transaction in this country involving four letters on each side can be carried through without an error due to the inability to write clearly. I would win twice for every time I lost."

The ironic part of it is that most engineers aren't aware that there is much of a problem in their own writing. One of our managers said of the typical person writing letters for him, "He has no idea that his letters are not perfectly clear. And they are to him—but not to me."

As staff men, you may be so close to the work that you are not aware of the big gaps that often exist between what you know and what you say on paper. You don't keep in mind the reader, and the reader's point of view.

Nothing will inspire you more with the need for better writing than to be placed on the receiving end. As a supervisor who reviews and must act on the letters written by half a dozen different men, you will find yourself on a paper route where you are blanketed by layer after layer of gently falling snow and huge wads of unrelated statements. You will read letters where plenty of numbers are quoted, but you will have no idea where they were obtained or how they compare with previously established values. After wading through paragraph after paragraph, you get the feeling that the writer is unable or unwilling to state his idea clearly.

Often the writer does have a good idea, but instead of reasoning it through he simply gives it a kick and sends it sprawling into his boss' lap. As supervisors, we know something must be done to improve these writing habits, but what?

We need to find a new way in business writing, and we need our managers' encouragement to try it.

WHAT IS THE NEW WAY IN BUSINESS WRITING?

The "New Way" tells us to use plain talk instead of the old formalities in business writing, and to reason it through from the readers' point of view.

This method is not really new. Back in 1667 we find Thomas Sprat writing about the scientists of the Royal Society, who tried . . .

" . . . to return back to the primitive purity, and shortness, when men delivered so many things, almost in an equal number of words. They have exacted from all their members a close, naked, natural way of speaking: positive expressions, clear senses; a native easiness; bringing all things as near the mathematical plainness as they can; and preferring the language of artizans, countrymen, and merchants, before that of wits or scholars."

The modern emphasis on plain talk in writing has been gaining momentum in the twenty years since World War II. Just browse through the attached list of references, or read any recent work on technical writing, and you will see that the emphasis now is not on grammar and punctuation and impressive style, but on short words, plain writing, and informality.

So the "New Way" is not really new—it's just that in most companies, no one is willing to be the first to try it and depart from the old formal style. But why not?

The New Way tells us we no longer have to pile on the formal impressive words the way we did in the term papers for the professors; now that we're writing business letters we can write for action and for readability. For example, we don't have to say,

> "The utilization of these pumps should be implemented in our operations."

when what we mean in plain talk is,

> "We should use these pumps."

The new version (the plain talk way) uses only five words instead of eleven, means the same thing, and is easier to read.

Not that the plain talk way will be easier to write. No, it will be harder, because it calls for more than just short words; it calls for them in a well-reasoned order that appeals to the reader's point of view. This means specific facts instead of vague generalities, and personal commitments instead of passive voice. For example, the usual way of writing an instruction goes like this:

> "It is requested that a reply be prepared and transmitted to the above-mentioned department as soon as conveniently possible."

The new way of using plain talk and specific statements goes like this:

> "Please send your reply to George Jones by April 25."

Do you see the difference? This way is specific—it leaves no doubt as to who or when.

To be convincing to the reader, we will have to quit hiding behind empty words like "it is believed"—we will have to say **who** believes. We will have to see that the fine-sounding phrase "based on previous data" which we often give as the reason for a key assumption, is really no reason at all unless we tell what the "previous data" was and how reliable it is now. This will mean some extra effort to look things up and pin them down, instead of using the easy generality "based on previous data", but it will make our story more convincing. In short, if we gain the reader's confidence by showing him we know exactly what we're talking about, he will be much more inclined to take the action we recommend.

The reason for the plain-talk well-reasoned way of writing, then, is not that it is easier to write, but that it is easier to read—and to act on. If an entire letter or report were to be written this way (see attached examples B, C, and D), it would probably be shorter, it would surely be easier to understand, and it would have a better chance of getting the desired result sooner.

BETTER WRITING LEADS TO BETTER THINKING

One of the biggest benefits of good writing is that it acts as a discipline to improve the writer's own thought. Good writing means writing and rewriting, editing and revising our own work. It calls for many changes before we are satisfied to let a piece of writing go out in final form. It is this effort that pays off. In this process of revision and rearrangement we often find that thoughts accidentally thrown together become a framework in which more may be developed.

The writer and his piece of paper are often similar to the artist and his canvas. The artist starts with a general idea of what he wants to paint; but after the painting begins to take form, what is already on the canvas starts to influence what is still in his mind. Frequently the finished product is somewhat different from what the artist intended at any given step of the way. The master artist expects to find improvement by this process.

The simplest kind of writing is merely thinking on paper. We must make a working drawing. We must spread out the parts on paper and try various arrangements of them; we must integrate what we know, fill the holes, throw out what is useless, straighten the tangles. We write to find ourselves, to find out what we do think.

Now let's get down to specific guidelines and examples.

THE ABC's OF GOOD WRITING

A. Accurate form: the rules of grammar and punctuation
B. Better sentences
C. Clear thinking
D. Down-to-earth realness, plain talk.

These items are obvious enough at first glance, but they need a little explanation. I have attached some examples of each category, showing a "typical" version and an "improved" version of the types of statements we often see in our business writing. As you read the following discussion of each category, you may want to refer to the examples at the end of the paper.

A. Accurate Form

The rules of English are not our biggest problem in technical writing. This category is included here more for the sake of completeness rather than for importance to our present purpose.

Don't worry too much about the schoolmaster's old-fashioned rules of grammar or usage. As the years go by, many of the purist's rules are being modified whenever common sense shows the way to get the meaning across more clearly. No longer need we spend so much time discussing whether "data" is singular or plural, or whether to use "formulas" or "formulae", "indexes" or "indices"—either choice is correct in each case. And the old issues of whether it is bad form to split an infinitive, or to end a sentence with a preposition, have become flexible enough to allow for common sense and readability.

In the final analysis, what makes sense to you and your readers should be your guide. This means not necessarily following every rule found in any given handbook or manual. Most modern dictionaries and textbooks of the English language support the general position taken above.

B. Better Sentences

Remember these tips for better sentences:

Simple words are strongest.

Avoid unnecessary words, roundabout phrases.

Keep most sentences under 20 words.

Keep most paragraphs under 10 lines.

Of course, your solution to the problem of clear writing will not come from counting the syllables in words, or the words in a sentence, or the number of lines in a paragraph. But you should be conscious of the problem of big words and long, rambling sentences—and realize that there may be a better way.

Learn to develop a feel for readability by simply looking over the type-written page. Do many sentences run longer than two lines, and few under? Do the paragraphs look forbidding because they cover a third of the page or more without a break? Spot the big "impressive" words—do you know shorter, plainer words that mean the same thing?

Of course it goes against the pseudo-professional instinct to say "about" instead of "approximately", but doesn't it mean the same? How about "use" instead of "utilization"? And really, aren't there times when just plain old "best" could be used instead of "optimum"?

C. Clear Thinking

The idea of clarity in writing is to persuade the reader step by step with evidence so plausible that he easily reaches the same conclusion as you. To do this, you must prefer the definite example to an empty generality. Take a stand; don't be a hedgehog.

To achieve this kind of clarity and emphasis calls for a certain amount of rewriting. If there is one rule that most good writers use it is this: Do not be afraid to rewrite. Go through several drafts, revising and recasting. Revise for shorter sentences and simpler words. If a sentence is vague, try making it concrete. Change the order. No matter how complicated a problem is, there is a way to express it clearly in words. Keep trying. As you develop the habit of writing and rewriting, you will see that the process actually stimulates your thinking and will lead to new ideas for solving the problem.

This advice to rewrite and revise doesn't mean you should become a perfectionist, dawdling all day over the contents of one short letter. If letters are passable, let them go out that way when you are rushed. But at the end of the week take some time to review the letters you have written. Try to spot the good and bad points.

Look for examples of good writing by others who get their ideas across effectively. Try to see the difference between a letter that's hard to read and one that's easy to follow; one that leaves you wondering why, and one that makes you say, "OK, let's do it".

D. Down-to-Earth Realness, Plain Talk

As I have said, I think our biggest problem in writing is the gap between what a reader recognizes as being simple and clear, and what a writer feels is required to make himself sound professional. We should practice breaking across this gap. Most of our ingrained writing habits are left over from our formal report-writing days in college. We should wake up to the fact that the English teachers were interested in form and grammar, while our bosses are interested in content and action.

For example, why must we always use passive voice in our letters? Our reports are filled with phrases like "it is believed", "the decision was made", and so on. The editor of **Science and Technology** magazine says, "The use of passive voice is often a device, conscious or unconscious, to avoid committing yourself or to hide your meaning." That editor tells his authors, "Make freer use of the word 'I'. Not merely because it makes for livelier reading, but because it forces you to be more precise about what you really mean. Let your own knowledge and opinions show through. Science is not anonymous." This is from an editor whose magazine is outstanding for its readable presentations to technical men in management.

Of course, we do need to preserve a certain relaxed dignity in letters we write to outsiders, but we shouldn't let this pressure to be dignified act as a strangle-hold on our own memorandums. Let's use plain talk. Let's give our ideas a chance to be convincing instead of merely recognizable.

E. But You Can Overdo It!

This section of examples is attached to show that the effort to use plain talk and to simplify can, of course, be overdone. These rules have their limitations, as do all rules.

As a final guideline, I am also attaching the following items:

F. Checklist for Engineering Letters

G. Procedure for Writing the Report

H. References

WHAT TO DO NOW

Let's suppose you agree with this emphasis toward plain talk and readability in technical writing. How will this change things in your office?

Well, there won't be any overnight revolution. You can't easily change the habits of a lifetime, and neither can your boss. And even if you could, you wouldn't want to start writing breezy, informal letters to everyone.

But you can simplify; you can try to use shorter sentences and clearer paragraphs. You can start each letter with a simple direct statement of the purpose of that letter, to help any reader tell at a glance what the letter is about.

You can keep from leading the reader through the verbal jungle that leaves him with that helpless feeling, wondering "What is this all about, anyway? What is he trying to say? What does he want me to do next?"

These are the things you can start with to make your business letters more effective. Although it takes effort and practice, learning to write better can offer you as technical people the same rewarding challenge that comes from any other opportunity to use reason and imagination in solving problems. The habit of using pen and paper to make up your mind and to extend your personality should be cultivated throughout life.

With this in mind, see if the comparisons in the attached examples offer any encouragement to you.

A. ACCURATE FORM

Avoid dangling modifiers, use parallel construction, make subject and verb agree. Do not be overawed by old-fashioned forms or rules of grammar.

Typical Version	Improved Version
Having deteriorated from long storage in the field, the superintendent could find no use for the chemicals.	The superintendent could find no use for the chemicals which had deteriorated from long storage in the field.
The design of a rocket is simple, but to produce a rocket is expensive, time-consuming, and repairing it is impossible.	Rocket design is simple, but production is expensive and time-consuming, and repair is impossible.
Estimation of the rate and time readings are desirable.	Estimation of the rate and time readings **is** desirable.

OPTIONAL FORMS NO LONGER TABOO

1. This data is insufficient.
2. These data are insufficient.

(Both OK, since "data" is now acceptable as either single or plural.)

1. Tell me to what he objects.
2. Tell me what he objects to.

(The second version is perhaps clearer, even though it ends the sentence with a preposition.)

1. The text fails to define the problem completely.
2. The text fails to completely define the problem.

(The second version is clearer, and justifies splitting the infinitive.)

B. BETTER SENTENCES

Use simpler words, shorter sentences, Avoid roundabout phrases. Use active voice instead of passive.

Typical Version	Improved Version
The utilization of these pumps should be implemented in our operations. (11 words)	We should use these pumps .(5 words)
The two attachments enclosed are memoranda relative to the strength properties and stability characteristics of the plastic. Also enclosed is a summary of the detailed information and conclusions contained in the two memoranda. (33 words)	Attached memoranda discuss the strength and stability of the plastic. A summary is also enclosed. (15 words)
The field of stress analysis is one in which model studies have often been used with a significant degree of success. (21 words)	Models have been used successfully for stress analysis. (8 words)
Although secondary recovery methods under certain conditions have been demonstrated to be highly effective in the production of oil, there is frequently a greater percentage of the residual oil content left in the reservoir after waterflooding than is recovered by this secondary method. (43 words)	Even when waterfloods are successful, they often leave behind more oil than they produce. (14 words)
The selection of the correct pump is of prime importance in all such instances, and it will be found that optimum results can be achieved if all the important factors are taken into consideration. If any doubt should arise, one should submit his questions to the Technical Department. (48 words)	Pump selection is critical in cases like this. When in doubt, ask the engineer. (14 words)
It is felt that the Carson-Jones equation is not valid in this area.	Our engineers agree that the Carson-Jones equation is not valid in this area.
It was found by the new testing method that the gasoline was not up to standard.	The new testing method proved that the gasoline was not up to standard.

C. CLEAR THINKING — BE SPECIFIC

Prefer the definite example to an empty generality. Take a stand; don't be a hedgehog.

Typical Version	Improved Version
Our Division has had significant amounts of production from major fields for a number of years.	Since 1954, our Division has produced over 1000 BOPD each from ten of the top twenty fields in West Texas. Production from these ten fields last year was 30% of our total Division production.
It is recommended that the subject project be initiated in the near future based on performance of other floods in the area.	We recommend the Davis Field flood be started by May 1, based on the offset Gulf flood which doubled its production last year.
A value of 10% was originally estimated for the porosity based on other reservoirs in the area.	In 1961 George Jones used a porosity of 10% taken from a single core analysis in the Davis Field.
In order to achieve optimum utilization of the existing lifting equipment and simultaneously obtain economic advantages relative to the combined operation of the two leases, it is recommended that pumping units be utilized for artificial lift on lease A and that gas lift equipment be utilized on lease B.	We recommend that pumping units be used on lease A and gas lift on lease B. This would save $1000 per month compression costs, increase production 10 BOPD on lease A, and make one compressor available for use in our gas sales project.
It is requested that your reply be returned through regular channels as soon as conveniently possible due to the critical nature of this project.	Please send your reply to George Jones by April 25, so he can contact the RRC before May 1 and thus save a possible 2000 barrels of allowable.
Available evidence tends to indicate that it would not be unreasonable to expect a greatly extended payout if one is achieved at all.	This project probably will not payout.

Improved Version

D. DOWN-TO-EARTH REALNESS, ALIVENESS

Drop the formalities and window-dressing.
Cut the fog and say what you mean.

Typical Version	Improved Version
In an endeavor to ascertain whether the proposals we have formulated are fundamentally sound, we anticipate engaging an independent consultant for the express purpose of determining whether the material found in our files can be substantiated through information accumulated under actual field conditions.	To see if our plans are soundly based, we plan to hire a consultant to check our data against facts gathered in the field.
Local Civilian Defense Volunteers	Home Guard
Vehicular Maintenance and Storage Facility	Garage
The base metal of an ornament may very well be an inexpensive imitation of a precious substance even when the surface is highly reflective and of a rich-looking finish.	All that glitters is not gold.
Nearly all operations in the industry lend themselves to performance by machine, and all grades of men's clothing sold in significant quantity involve a very substantial amount of machine work.	Most of men's clothing is machine made.

E. BUT YOU CAN OVERDO THE EFFORT TO SIMPLIFY AND BE DIRECT.

Shortness and simplicity are the foundation of good writing, but they are not the sum and substance of it.

Original Version	Simple Version—No Improvement
Never in the field of human conflict was so much owed by so many to so few. (Churchill, House of Commons, Aug. 20, 1940)	We certainly owe a lot to the RAF. (No impact)
The refiner may maintain selectivity by continually replacing part of the catalyst with fresh material, but he thus increases production costs.	The refiner wants to maintain selectability. He can do this by adding fresh catalyst. Then he should throw away part of the old. But this increases his production costs. (OK, but shorter sentences are choppy.)
Increased aminopeptidase activity was observed in chronic myelocytic leukemia, but myeloblasts were non-reactive.	(There is no way to avoid use of long technical words in this sentence.)
Due to an unintentional oversight, the monthly report was mailed Monday instead of last Friday.	The monthly report is late because I forgot all about it last week. (Plain talk and more accurate—but is it necessary?)
At the present time we do not foresee an opening on our staff for an engineer with your qualifications, but we will keep your application on file in the event conditions change.	Sorry, we don't want to take a chance on hiring you because of your poor college record. (More direct, but not diplomatic.)

F. CHECKLIST FOR ENGINEERING LETTERS

1. Put the recommendations up front, in the first line if possible. Don't make the reader hunt.
2. Refer to previous correspondence by name and date. Where many letters are being handled, this helps the reader orient himself.
3. Display the profit indicators in a short tabulation on the first page.
4. Tell why this project is a good proposal. Give examples of similar projects. Has this worked before, and how likely is it to work now?
5. Give the basis of the assumptions used in the profit indicators. How much of the basis is reasonably known, and how much is opinion? Are any assumptions subject to wide variation due to uncertainty?
6. Have all the reasonable alternates been considered? On what basis were other alternates ruled out?
7. How does this proposal fit in with previous plans and budgets?
8. In a long letter, paragraph headings or labels may help the reader see the main points.

G. PROCEDURE FOR WRITING THE REPORT

1. Gather data. May take days or weeks to get all material. Think about subject from every angle while gathering data.
2. Pick a title and write it down—you can change it later.
3. Get your first thoughts down on paper. Try to cover the subject, but not in order or even complete. Don't form rigid conclusions too early in the work. Stay open for unexpected ideas.
4. Think how to organize these thoughts. Outline. Re-arrange. Fill in to make a readable first draft or an expanded outline.
5. Confer with your boss or whoever must approve the report. Show him the outline. If you're not on the right track, this is the time to find out. If you are, get his OK to go ahead.
6. Revise. Cut out anything that doesn't fit. Rewrite anything that sounds awkward. Try for thought and ideas in this second draft.
7. Simplify and polish the sentences. Check for small errors. Make your statements so clear that no reader can possibly misunderstand what you say. Try for style and effect in this final draft.

H. REFERENCES

The following are recommended as above-average works of their kind, offering practical up-to-date advice on getting ideas across in technical writing:

1. HOW TO TAKE THE FOG OUT OF WRITING, by Robert Gunning. Dartnell Press, 1959, 4660 Ravenswood Avenue, Chicago 60640. The best single reference with practical examples for improving business writing today. Booklet, 50¢.
2. ENGINEERED REPORT WRITING, by Melba W. Murray. Petroleum Publishing Company, 1964. Box 1260, Tulsa 74101. One of the best, and especially useful to petroleum engineers because it is written in their language and uses their examples. Paperback, $3.00.
3. EFFECTIVE WRITING FOR ENGINEERS, MANAGERS, AND SCIENTISTS, by H. J. Tichy. John Wiley and Sons, 1966. Excellent, up-to-date advice written in lively style.
4. WRITER'S GUIDE AND INDEX TO ENGLISH, by Porter G. Perrin. Scott, Foreman 1965. One of the finest, most useful textbooks. Oriented to modern usage.
5. THE IMPORTANCE OF COMPLETED STAFF WORK, by Mobil Oil Corporation. 150 East 42nd Street, N. Y. 10017. Pamphlet.
6. PLAIN LETTERS, by U. S. Government Printing Office, 1955. Washington, D. C. 20402. Federal Stock No. 7610-205-1091. Price 30¢. How the Government tries to cut out the gobbledygook.
7. THE ELEMENTS OF STYLE, by William Strunk and E. B. White. Macmillan, 1959.
8. HOW TO WRITE BETTER AND FASTER by Terry C. Smith. Thomas Y. Crowell Co., 1965.
9. BETTER BUSINESS ENGLISH, by George Classen. Arco Publishing Co., 1966.
10. STYLE GUIDE FOR PUBLICATIONS, by Society of Petroleum Engineers of AIME, 6200 N. Central Expressway, Dallas, 75206.
11. WRITING FOR THE PETROLEUM PUBLISHING COMPANY, by The Oil and Gas Journal, Box 1260, Tulsa 74101. Pamphlet, single copy free.
12. WEBSTER'S NEW WORLD DICTIONARY, by The World Publishing Company, 1959. Popular Library Pocket-Size No. SP-15. Price 50¢.
13. THE STANDARD COLLEGE DICTIONARY, by Funk & Wagnalls, 1963. Price $6.50.