The Three Acid Tests of Persuasive Writing

COMMUNICATION CORNER

by Philip Yaffe

Editor's Introduction

Each Communication Corner essay is self-contained; however, they build on each other. For best results, if you have not already done so, before reading this essay and doing the exercise, go to the first essay "How an Ugly Duckling Became a Swan," then read each succeeding essay sequentially.

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If there are still scientists toiling away with little regard for what others may think of their efforts, it's time to drag them kicking and screaming into the 21st century.

In today's interconnected world, what scientists do is of vital concern to the wider public. And vice versa. Just consider the controversies surrounding nuclear energy, genetic engineering, telephone antennas, global warming—and even the effects of computers on education and individual liberty (surveillance society).

For people engaged in science, both pure and applied, communication with the general public is no longer an option; it is a requirement. Unfortunately, scientists (like most other people) write poorly, because they have never been taught any better. While schools emphasize creative writing (literature), they give short shrift to expository writing, that is, effectively conveying ideas and information.

So when we sit down at the keyboard, how can we be certain that our readers will understand what we say with minimum effort and maximum interest?

We can't. However we can greatly improve the odds by abandoning subjective ideas of what constitutes expository writing and replacing them with quasi-objective criteria.

During my 40-year career, I have relied on three such criteria, or “acid tests,” that have served me very well. Not just for writing myself, but equally for evaluating the writing of others.

Many people don't actually do much writing themselves, but frequently may have to critique the writing of others. It is of very little use to tell someone that a text isn't “good enough,” “interesting enough,” or “just doesn't feel right.” So work on it. Such fuzzy criticism is not only unhelpful; it can be positively demoralizing.

I am reminded of the story of a junior executive who presented a document he had written to his superior. He was told, "Make it more interesting." Being conscientious (and somewhat fearless), he replied: "Sir, this is the best text I know how to write based on the information I have. Unless you tell me exactly what you are looking for, any way I change it will only make it worse."

Fortunately, the man's superior recognized the wisdom of the comment. In other words, in order to critique usefully, you must be explicit. This is exactly what my three criteria allow you to do. Actually, it is incorrect to call them "criteria," because they are more than that. They are fundamental principles in the form of formulas that provide step-by-step instructions for producing recognizably well-written texts, whatever the format or subject.

If you are the originator, they tell you:

- 1) How to write your text in the first place
- 2) How properly to edit it when you have finished

If you are the critic, they tell you:

- 1) What the text should contain
- 2) What needs to be done to improve it

Before looking at them in detail, let's first agree what we mean by a well-written text. For most people, it has at least two principal characteristics; it must be both "clear" and "concise."

Unfortunately, both of these are "weasel words." They mean different things to different people, as well as different things at different times. This is why we need quasi-objective tests to be certain that these words will mean essentially the same thing to all people all the time.

There is a third aspect of a well-written text called "density," for which we also have a quasi-test.

Test for Clarity

According to the Clarity Principle, to be clear a text must do three things:

1. Emphasize what is of key importance.
2. De-emphasize what is of secondary importance.
3. Eliminate what is of no importance.

In short: CI = EDE

If you follow the formula, when you evaluate a text (yours or someone else's), the first thing you should look for is: Do the key ideas fully stand out?

Key ideas are the concepts and conclusions the writer wants the readers to take away from text. Too many writers shy away from the hard work of defining the key ideas. It is far simpler to say that everything is of key importance, so they put in everything they have. However, unless the writer does the job of defining what he really wants the readers to know, they won't do it for him. They will simply get lost in your text and either give up or come out the other end not knowing what they have read.

Second, check that the text de-emphasizes everything that is of secondary importance. Why? Because if you want readers to recognize and retain the key ideas, then you don't want them getting lost in the details. Details (information of secondary importance) explain and support the key ideas; they must never overwhelm them.

Finally, you must ruthlessly eliminate everything of no importance. These are bits of information that are neither a key idea nor explain or support a key idea. Nothing is neutral. Whatever doesn't add to a text, subtracts from it. And so must be deleted.

Test for Conciseness

According to the Conciseness Principle, a well-written text should be as:

1. Long as necessary
2. Short as possible

In symbols: Co = LS

It is commonly claimed that people today have shorter attention spans than in the past, so texts must also be shorter. I am unaware of any scientific evidence that supports this contention. However, I am aware of considerable historical and psychological evidence that disputes it.

People pay attention to texts that catch and hold their interest. Once that interest wanes, they stop reading. It's as simple as that. Whatever effect radio, television, films, the Web, and other

media may have had on average attention span, individual attention span is governed by self-interest. This has always been true, and remains so.

The objective, therefore, is not to constrain a text to fit some artificial limit, but to be certain that everything it says has purpose and meaning for the reader. This is what makes a text concise, whatever its length.

In the Conciseness Principle, “as long as necessary” means covering all the key ideas you identified under “clarity,” and all the information of secondary importance needed to explain and support them. Note that nothing is said here about the number of words, because it is irrelevant. If it takes 500 words to be “as long as necessary,” then 500 words must be used. If it takes 1,500 words, then this is all right, too.

“As short as possible” means staying as close as you can to the minimum. Not because people prefer short texts. “Long” and “short” are weasel words; in the abstract they have no meaning because what is “long” in one circumstance is “short” in another.

The important point is: All words beyond the minimum tend to damage clarity. Subconsciously, readers will continually be trying to understand why those words are there. And will be continually failing because they serve no purpose.

Test for Density

“Density” is a less-familiar concept than clarity and conciseness, but it is equally important. According to the Density Principle, a text should contain:

1. Precise information
2. Logically linked

In other words: $D = PL$

Using precise information rather than wishy-washy weasel words aids clarity. For example, if you say it is a “hot” day, what do you mean? One reader might interpret hot as 24° C while another might interpret it as 36° C. However, if you say the temperature outside is 28° C, there is no room for interpretation—or misinterpretation.

Using precise information also generates confidence, because it tells the reader that the writer really knows what he is talking about. This helps to hold the reader’s attention and makes it easier to get key points across.

However, precise data (facts) by themselves are insufficient. To be meaningful, data must be organized to create "information". There are two important tests to apply when converting data into information.

A. Relevance

Is a particular piece of data really needed? As we have seen, unnecessary data damages clarity and ultimately confidence. Therefore, any data that do not either aid understanding or promote confidence should be rigorously eliminated.

B. Misconceptions

The logical link between data must be made explicit to prevent readers from coming to false conclusions. Example: A singular occurrence may be misinterpreted as part of a broad pattern; a general policy may be misinterpreted as applying only in specific circumstances, etc.

To ensure that a logical link is clear, the two pieces of data should be placed as close to each other as possible, preferably right next to each other. When data are widely separated, their logical link is masked. If the writer doesn't make the logical connection, it is unrealistic to expect that readers will do so for themselves.

So there they are—three "acid tests for clear, concise, dense writing. Although quasi-objective, these tests are not a panacea. They require you to think; in fact, they force you to think. And that is their strength, because they guide your thinking to precisely what you should be thinking about.

According to the adage: "If you don't know what you are looking for, you are unlikely to find it even if it's right in front of your nose." Well, now you know.

Mathematical Magic Redux

In my previous Communication Corner, I showed an intriguing magic trick based on a mathematical formula. Anyone can do the trick; you just need to know the formula. However, as a teenager in love with mathematics, I wanted to know why the formula works, but I simply couldn't figure it out. As I mentioned, only later in life did I realize that something about the instructions for doing the trick had led me astray. If you have figured it out, congratulations. If not, here is the solution.

The red herring is the first caveat: “Never start a pile with a picture card.” Because the formula requires you to count out 10 additional cards no matter what the value of the two visible top cards of the three remaining piles, I assumed there had to be some kind of relationship between the cards 1, 2, 3, 4 . . . 10 which did not apply to picture cards (Jack, Queen, King). However, there is no such relationship. If you count the Jack as 11, the Queen as 12, and the King as 13, the formula still works.

I suppose that the person who showed me the trick was not trying to be misleading. He probably said not to use picture cards because this would give piles that could possibly be identified because they would have so few cards, i.e. only one, two, or three.

How the formula is derived

To derive the formula, we start with what we know about the cards.

Fundamentally, we know that after dividing the cards into piles, H (number of cards in the hand) plus T (number of cards on the table) must equal 52, i.e. $H + T = 52$.

We also know the number of cards in each of the two piles where the first card has been turned face up. It is $14 - \text{value of the first card}$. Example: If the face-up card is 8, then to make the pile we had to have counted 8, 9, 10, 11, 12, 13. So the number of cards in that pile will be $14 - 8 = 6$.

Now we put the things together using the basic relationship $H + T = 52$. Let T_1 be the value of the face-up card in the first pile, T_2 the value of the face-up card in the second pile, and X the value of the still face-down card in the third pile. Then T must be $14 - T_1 + 14 - T_2 + 14 - X = 42 - T_1 - T_2 - X$.

If we put this back into the basic formula $H + T = 52$, we get $H + 42 - T_1 - T_2 - X = 52$. Rearranging, we get $52 = H + 42 - T_1 - T_2 - X$. Solving for X , we get $X = 42 - 52 - T_1 - T_2 + H$. Simplifying gives $X = H - T_1 - T_2 - 10$.

We can now see where that misleading 10 comes from. It is just coincidence; it has nothing to do with the fact that there are 10 numbered cards and 3 picture cards in each suit.

In terms of the card trick, the formula tells us that from the cards in our hand, we must first subtract (count out) the value of the face-up card on one of the piles, then subtract (count out) the value of the face-up on the second of the piles. Then subtract (count out) another 10 cards. The number of the cards left in your hand will be the value of the face-down card on the third pile.

By no stretch of the imagination do I presume to compare myself to Johannes Kepler. However, after years of puzzlement, when I suddenly realized that the 10 in the formula had no mystical power, I did feel a bit like how I imagine Kepler must have felt when he realized that circles have no mystical power in describing planetary orbits and replaced them with ellipses. It is a feeling hard to describe—and even harder to forget.

Homework

It is axiomatic that to convey information, or to propose or defend an idea, you must attract and hold the attention of your audience. In this exercise, you have a first chance to apply the three acid tests of persuasive writing to try to achieve this cardinal objective.

Here is an article I was once asked to evaluate and edit. It has nothing to do with computing because the principles and practices to be covered in the Communication Corner are universal. They apply to computing in particular, science in general, and any other subject area about which you may wish to write or speak.

Over time, you will begin to automatically apply the three acid tests as you write the first draft of your text. However, when revising, you should consciously and explicitly ask yourself which tests have not been properly applied (i.e. the three criteria of clarity, the two criteria of conciseness, the two criteria of density), then what you need to do to bring it into line. The more you internalize (automatically apply) the tests to your first draft, the less work will be required for the revision. However when revising, conscious and explicit application of the three acid tests will always be necessary.

Please revise these few paragraphs (the whole article is very much longer) according to what you have learned in this essay about the three acid tests of persuasive writing.

In future installments of the Communication Corner, I will offer specific techniques for applying the three acid tests, but for the moment just do what you can. I am certain you will already see a significant improvement.

To do the exercise:

- First read the original text.
- Then read the commented text (text in italics).
- Finally write your revision.

(Original Text)

“Animal Production, Good or Bad?”

Animal production for human exploitation adversely impacts our environment, and our lives.

Animals have been farmed for human use for thousands of years. But the middle of the 20th century saw the beginning of a significant change in animal farming. New technologies allowed for high density farming while economies demanded it. This high-tech, high-volume farming has commonly been referred to as factory farming, but in more sophisticated circles CAFO (Concentrated Animal Feed Operation) is probably preferred. The nature of this mode of farming improved efficiency, lowering the unit cost of bringing animal products to the grocery shelves. But it also created and accelerated inherent problems in the animal production industry.

The food animal business (meat, dairy and eggs) provides products highly demanded by the majority of the population. It also supplies jobs for a significant segment of society and financial gratification for those in position to benefit. This industry has grown as a result of demand and the ability to supply that demand with modern tools and technologies. Along with the growth of the animal production industry came a growth in concern for the impact this industry has on the environment and ultimately—life. As with many industries the true cost of animal products are not evident in the sticker price. The deferred costs, not paid at the time of purchase, get paid eventually. ***These costs include: destruction of the environment, sickness, disease and early death.***

Our children and grandchildren will continue to pay for our shortsightedness. Another, less tangible, byproduct of this industry is psychological stress. This stress affects the suppliers as well as the consumers—in as much as slavery adversely affected the slave owner as well as the slave.

There are movements trying to mitigate the negatives of the animal industry on the environment. The efforts of these movements are small in comparison to the combined pressures bearing down on this planet today. Their efforts may slow the problem but will not solve it. The animal production mentality is nothing new, but with crowding and new science we live in a different reality.

(Evaluated Text)

“Animal Production, Good or Bad?”

The title is banal. Try something that better intrigues the imagination, such as:

- How much longer can we afford "cheap" food?
- Cheap food: the sticker price doesn't even begin to tell the cost

- Is cheap food pricing the planet out of existence?

Animal production for human exploitation adversely impacts our environment, and our lives.

This is a startling statement that needs some explanation before passing on to the historical perspective on animal production. Add some information here that gives the reader a better idea of the scope of the problem.

Animals have been farmed for human use for thousands of years. But the middle of the 20th century saw the beginning of a significant change in animal farming. New technologies allowed for high density farming while economies demanded it. This high-tech, high-volume farming has commonly been referred to as factory farming, but in more sophisticated circles CAFO (Concentrated Animal Feed Operation) is probably preferred. The nature of this mode of farming improved efficiency, lowering the unit cost of bringing animal products to the grocery shelves. But, it also created and accelerated inherent problems in the animal production industry.

The food animal business; meat, dairy and egg, provides products highly demanded by the majority of the population. It also supplies jobs for a significant segment of society and financial gratification for those in position to benefit. This industry has grown as a result of demand and the ability to supply that demand with modern tools and technologies. Along with the growth of the animal production industry came a growth in concern for the impact this industry has on the environment and ultimately—life. As with many industries the true cost of animal products are not evident in the sticker price. The deferred costs, not paid at the time of purchase, get paid eventually. ***These costs include: destruction of the environment, sickness, disease, and early death.***

This statement cries out for some kind of explanation. People might intuitively accept factory farming is not "natural" and therefore probably has a negative impact on the environment. But what do you mean that it also leads to illness, disease; and early death? You talk about this later on in terms of cancer and vascular disease. However, without some clue as to what you are talking about, I am already disinclined to read any further.

Our children and grandchildren will continue to pay for our shortsightedness. Another, less tangible, byproduct of this industry is psychological stress. This stress affects the suppliers as well as the consumers—in as much as slavery adversely affected the slave owner as well as the slave.

Now I am certain I would stop reading. Comparing animal production to human slavery just seems too outlandish to be serious. You could perhaps develop this idea later on (much later on), but putting it here as a throwaway line is almost certain to alienate the majority of your potential readers.

There are movements trying to mitigate the negatives of the animal industry on the environment. The efforts of these movements are small in comparison to the combined pressures bearing down on this planet today. Their efforts may slow the problem but will not solve it. The animal production mentality is nothing new, but with crowding and new science we live in a different reality.

About the Author

Philip Yaffe was born in Boston, Massachusetts, in 1942 and grew up in Los Angeles, where he graduated from the University of California with a degree in mathematics and physics. In his

senior year, he was also editor-in-chief of the *Daily Bruin*, UCLA's daily student newspaper. He has more than 40 years of experience in journalism and international marketing communication. At various points in his career, he has been a teacher of journalism, a reporter/feature writer with *The Wall Street Journal*, an account executive with a major international press relations agency, European marketing communication director with two major international companies, and a founding partner of a specialized marketing communication agency in Brussels, Belgium, where he has lived since 1974. He is the author of more than 20 books, which can be found easily in Amazon Kindle.

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