The sound of words on the printed page

By J.P. LINDSEY
SEG Editor, 1991-93

Back when Walt Kelly was giving us daily laughs with the antics of Pogo and his friends, Nixon, Agnew, and J. Edgar Hoover were holding forth on the political scene. Kelly, always one to quickly notice a political soft spot, produced several *Pogo* episodes featuring three dogs whose faces were undeniably Nixon, Agnew, and Hoover. In the strip, they were constantly plotting on how to control the thinking of ordinary unsuspecting people in everyday life. Hoover hit on the idea of developing a strain of small spiders that looked like asterisks in a book and which could be trained to take up any position in the book to which they were assigned. It was Hoover's contention that if you controlled the positions of the asterisks in a book, you controlled its meaning. And he produced several examples that were convincing indeed.

While *Pogo* was the wild flight of a political critic's mind, there seems to be a thread-like linkage between Hoover's simple concept of asterisk control and the proposal of Gopen and Swan about controlling the reader's mind by the use of "stress points" in the sentences of prose. I agree with all this. The writer does control, via his or her written words, in some degree the reader's thought process. The pity of it all is that, for scientific writing at least, the writer is totally unaware of this fact. And by default, the golden opportunity for reader control and thus true communication goes down the tube.

I have not always felt that the writer bore any responsibility other than to write what he had to contribute. Back when I was a "researcher," I actually felt that readers ought to pay attention to what we researchers were dropping in the way of pearls of wisdom. It angered me that they would dare claim that they couldn't understand what we were talking about. That was their responsibility-to figure out what we meant! Well, I look back on that time with a mixture of chagrin and amusement. The fact is, it is the writer's responsibility-pure and simple-to effect the communication. After all, a reader does have other things to do besides reading what some harebrain thinks he has done. If the material is complex, but yet important, the writer must do the communicating! Who else can? If the reader could, who needs the writer? Of course the hook comes in the form of the mechanics of thought and its apparent lack of linkage with the mechanics of written communication.

I read once that the human mind worked in one of two basic ways: It formed thoughts either in images or in words. Those who thought in images were called geometrists. Two-thirds of us are geometrists. The rest, those who think in words, are algebrists. *Now the* terms *images* and words are not to be taken too literally. The images in the minds of geometrists may not always be reducible to anything as specific as a cat or house or cloud. And the words in the algebrist's mind may not be as specific as those spelled out on a billboard. But these are nevertheless workable definitions of the generic form of thought patterns.

If you want to test yourself, have someone make up a word list for a little word association test. What "appears" in your mind after each word is presented will classify you. It's very simple for nouns-particularly ones with which we are familiar. But when the word is *concept,* it becomes a little muddier. Try words like *truth* or *democracy* or *affable* for example.

Dean Clark claims that trouble occurs in written form when a geometrist attempts to communicate with an algebrist. I suspect he is right. Especially when the geometrist is writing in GEOPHYSICS. But it is almost impossible to get anywhere with mathematical thought as an algebrist. So how do we establish the communication independent of our type of thought process? I think the concepts of Gopen and Swan may be hitting close to the answer. The stress points of sentences intrigue me. And the idea of linkage backward and forward seems obvious now that I think about it. These concepts do a lot more for me in a concrete way than all the other writing advice I have received over a lifetime.

Authors, are you listening? Surely you want your material read. And surely you want it understood. You can achieve both! It's in the way you form the words that tell your story. And it's not a talent that some are given and some are not. That's a cop out! It may be easy for some and hard for others, but we can all learn how to communicate...if we want to enough.

I would offer the analogy of software. Hardly a geophysicist has escaped punching keys and moving mice before a screen. Software written by a programmer-mathematician is like a standard technical treatise. You can figure out how to use it, but you have to be somewhat of a disciplined archeologist to piece it all together. On the other hand, software that has had the extra touch of a good user interface-intuitive menus, context sensitive help, stability in the face of unexpected menu choices, etc.-is fun to play with. Now that's the way a technical paper ought to be! It tells you all you want to know, how the subject matter will affect you, how to start using it, and for what!

If I could redesign the world of technical journals, I would find a way to identify and employ editors whose skills were putting "user interfaces" on submitted articles. In the case of GEOPHYSICS papers, there's usually something worthwhile somewhere in all that complexity. Otherwise it wouldn't have passed editorial muster, believe me! We either need good editors who can find it and bring it out in words such that we can all have it if we wish, or authors must work to become good editors of their own efforts. To me, that's what Gopen and Swan is all about.

But the reader is not without responsibility. The high school conundrum of my day was that old question about the tree that fell in the forest. If no one was there to hear it, would it make a sound? That may seem a silly question to erudite geophysicists but, if so, how can he claim there is nothing of value in his technical journal if he's not there to read it? Oh yes, it's making a sound all right! **l**E