Graphics Overview

Edmund Arnold

You can not make a fish bite on a hook and you can not make a reader read your printed communication. The whole job of the editor immediately after something has been written is to put enough warm worms, if you will, on this reading job to cajole the reader into consuming his product whatever it is.

Let's remember that we are communicators, and let's go back to the basics of communication. The communications theory tells us that in order to communicate we must have an encoder, we must have a message, then we must—and this is essential—have a decoder, and all these must be contained in a system. I am sure that many of you will concede that you must have a seeker and a writer and a reader. But why the academic gobbledygook? The reason I have chosen these terms is to emphasize for all of us this one syllable *code*. We communicate in code constantly. The code we are using right now is English or specifically American English. We will be using the jargon of print journalism as we move along; we will be using some of the jargon of your particular area of journalism. We use slang and we have some semantics mixed in all the time. What is semantics? Well, as two psychiatrists were walking along they passed

Edmund C. Arnold, author of three books on graphic arts, made these remarks during a workshop at the ACE National Convention, Newark, Delaware, in July. He redid the Christian Science Monitor and has consulted on the design of seven major daily newspapers, including the National Observer, the St. Louis Post-Dispatch and the Kansas City Star. These excerpts present an overview.

one of their colleagues, who said "good morning" and continued walking. The two took about three steps, stopped, and looked at each other and said, "I wonder what he meant by that?" Semantics is what we really mean when we say "good morning," what we really say when John Jones is doing a "creditable job" as a communicator.

The code that particularly involves us are the funny little marks which we call the Latin alphabet. And we expect people to look at these very peculiar, very illogical shapes and give them phonetic values, to put them together to create words, and ultimately phrases and sentences, and then to decipher it and answer, "What does he really mean by that?" The whole process of communication, especially through print media, is a very complex one. We do have to keep that in mind all the time as we are going back through the basic problems that confront you and me constantly. We ought to note that anything else in the system other than the sender and the receiver and the mesaage is *noise*. But let me remind you that until the reader does his or her job, our job is not finished. We get paid for encoding and sending out messages. So there is a reason for us to do our job as encoders. But the reader does not have to read, does not have to do his or her part of the job. And if readers do not do their job, our job is not complete. We can not make them, we can only cajole them. So we are going to send them the message in the way that the receiver is willing to accept it.

In print media we have basically three problems. The first we might call the mechanics of reading. This business of looking at these tiny little marks that we call the alphabet, recognizing them, and translating them into words and thought is a very difficult one. You and I probably do not realize that because we are more or less professional readers. Let's say our typical subscriber is a lousy reader—the younger he or she is the worse he is. The typical high school graduate today who has graduated within the last ten years has a reading skill of 6.2 grades. I want to stress that this is not an indicator of intelligence, this is a rare skill, reading is. If you can not water ski or I can not play a violin that does not mean that we are idiots, it just means that we have not been taught that skill. If someone can not read, it means exactly the same thing. So reading is a difficult job that our subscribers have not mastered very well and so we are going to have to do something about that.

The second concurrent problem is the "psychology" of reading. If you and I do not know how to do a job easily, we

fear it literally. We tend to postpone it, and we hope that untimately we can avoid it entirely. That is what our reader, our subscriber, tends to do—postpone this job of reading. So our problem is to sugar coat that bitter pill to make it more attractive or less frightening to the reader.

Then the third problem is what we might call the economics of reading. I do not have to tell you that the manipulation of type is the big expense item in whatever you are doing. The setting of type and composing it into pleasant page patterns represents the big chunk of our budget. All of us must work within that budget. We had best work not only within the budget of dollars, but within the budget of time, which is more important than dollars in many instances, and also the budget of human resources. We must also operate within the budget of the subscriber. If we are selling whatever we are producing, whether it is the morning *Washington Star,* which just happened recently, or whether it is a booklet on how to can cucumbers, we must price it within the range of the buyer's desires and needs. Most importantly, though, we must budget within the time the reader has available for our particular publication, which is never enough.

Now these are the three problems. The mechanics, the psychology and the economics of reading. Any one of them is enough to keep any one of us going full-time all the time, yet we must solve these things simultaneously and repetitively. Fortunately, we have got one stone, which may not kill three birds, but it will knock them reasonably well, and that is "functional typography."

Functional typography is a philosophy, if you will. It means every element on a printed page must do a useful, necessary job of communication in the best possible way. If the element does not do a good job, if it is not functional, it is *noise* and we must get it out of the system.

Now let me show you how we test elements for functionalism. This is going to look gimmicky to you. But please believe me that it is not. It works and it works very well. First, place your finger on the element you want to evaluate, in this case the name plate of the *Ace Newsletter,* and ask the first question. Does this element do a useful, necessary job? Of course it does. It tells us what it is, it is the title, it is a necessary job. It is functional. If an element proves to be functional, we ask the second question. Can we do this necessary job, faster or easier or better or more profitably? At this stage, we examine our options: We might make the words bigger and the logo smaller. We might use one of the

other logos in the competition instead of this one. We might use different type. We might say Agricultural/Communicators/In Education and make it a vertical element. We might use color, either for the type or in back of the type or around the type. There are so many things we might do. But usually we are satisfied with how this element is doing its job. If that is the end result, this is still not an exercise in futility. Because it gives us the assurance that what we are doing now, we are doing as a matter of decision—our decision—rather that an inheritance from some editior of the past. We know that we are doing it, we know that we have evaluated it, we know that we are doing it becuase we want to do it and not becuase it is a habit, a conditioned reflex. That is usually the way it goes.

But every once in a while we get to an element like this two-point rule under the nameplate and over the date. There is no detail too small for us at this time. We ask, does this rule do a useful, necessary job? And now the answer is either "No" or a puzzled silence. We do not know what it is supposed to do, and we do not know whether it is doing it or not. It does not seem to be doing anything useful. In that case it is non-functional, it is noise, and we throw it out. Now notice what happens when we throw out something non-functional. First, we save the expense of the material and the handling, although the expense of putting in a line is a trifling one, it is the accumulation. If we put in a thousand lines that are unnecessary, we are starting to get into money. Anything that does not do us any good is a waste, and the principle of waste is bad. Wasting a penny is as bad, in principle, as wasting a dollar. So if this is a waste, let's throw it out.

Secondly, we serve the reader best, because an element which is *non*-functional, most of the time becomes *mal*functional. If it does not do something good, it does something bad. If it does not attract the reader, it distracts the reader. If it does not communicate to the reader, it wastes his or her time. So our reaction is, if it is not functional, throw it out. I would suggest that what we are doing with the rule is separating May 1979 from the nameplate when that ought to be an integral element. If you want to separate the nameplate from the rest of the page with a rule, there is a modicum of logic there. But always this is ultimately a question of judgment.

If we have qualms about throwing something out prematurely, we ask the next question. If I have guessed wrong

and throw out this rule and it should not be thrown out, what is the worst thing that can happen? And the worst thing that can happen to an editor is somebody will not read the priceless prose that he or she has composed for him. So then we ask ourselves. If I throw out this rule, would a reasonable person think I am going to sacrifice readability and readership below the nameplate? And I think most of us cannot believe that that rule increases readership. That meant I can not believe that if I take it out it decreases readership. So throw it out.

Let me add a little footnote. A lot of people think that functionalism then would strip our publication bare of all ornamentation. And that is not true. Because ornamentation is a lure, it is part of the bait. It can be functional. If ornamentation captures the fancy of the reader and lures him or her down into the body type, then it is *not* functional. Boxes at the moment are very fashionable. Boxes do not do a thing as far as readability is concerned. But boxes are fashionable, and this is how the editor says to the reader, "Look how 'Now' I am, I am really with it." We have got to do things to concede to fashion because we are competing in a marketplace, a highly competitive marketplace where fashion is a very significant factor. The clothes we are wearing in this room today, we would not have been caught dead in 10 years ago or 10 years from now. Now your dresses, ladies, or our shirts, gentlemen, are not any more functional because the collar is long or short or up or down or tab or whatever it is. The function of our clothing does not change at all. But the fashion does. So we are uncomfortable if we are unfashionable. And boxes are fashionable.

How do we really know what is and what is not functional? We do it by studying the reader. We can adapt, we can do just about anything we want to do with our message, our encoding. The reader is the one who is not going to change, so we study the reader to see how he or she reacts. We come up with the Gutenberg diagram. This is a rather grandiosely named device for something that is basically simple. Just as Gutenberg's invention of movable type was the basis for your job and mine, so the Gutenberg diagram is the basis for our jobs as communicators. The Gutenberg diagram tells us that this is where a page starts. This is the Primary Optical Area, we call it the POA. On any page, whether we are writing or reading, we start right here in the POA. We teach infants that. Anytime you sit a baby down and look at a picture book with him and you start, "Here is the apple" and

FLAG

Headline: banner _____

PRIMARY
OPTICAL
AREA

reading
diagonal
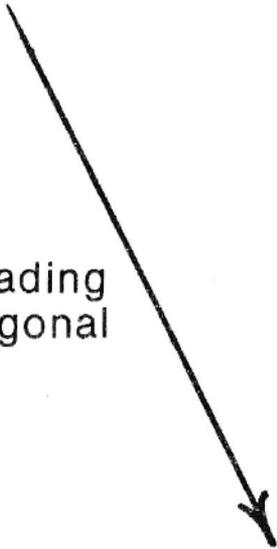
TERMINAL
AREA

"Here is the ball," you are already telling that little guy this is where a page starts. It also tells us that when we get to the bottom corner we are done with a page. This is the terminal area. So the basic motion of the reading eye is this reading diagonal. This is also called reading gravity, which is probably a better term. Just as physical gravity is constantly pulling your body and mine down toward the center of the earth. So reading gravity pulls the eye downward and to the right. And just as we cannot turn gravity down overnight or turn it off, we can never turn off reading gravity. It is always there and it is always strong.

It is built on the Latin alphabet. So if you want to read anything in that alphabet, you have got to go from left to right; and you have got to go from top to bottom. Now if you are reading in one of the Semitic alphabets, in Arabic or Hebrew, their reading gravity goes the other way.

Now this reading diagonal does not mean that the eye sticks straight to the diagonal's path. It moves more like a youngster in a park. He is supposed to go straight down the path. but if he sees a monkey cage over here or a carousel down here, he can be lured off. So we very deliberately put magnets all through a page, a booklet or an advertisement to get the eye through the whole area. Just as you and I do not like to go against earth's gravity so the eye does not like to go against reading gravity. We do not want to go up a hill or up the stairs. We want to go on a level, or we want to go downward. And so wherever the eye finds itself on a page, it will resist attempts to make it go upward or to the left, which is against gravity. That meant that if we have brought the reader down low on a page, the chances of his going backward to read something higher are pretty slim.

Notice that nothing you and I can do typographically is so bad that it will completely demolish readership. In a daily newspaper you can set something in four-point type and run it under the classified ads, and somebody is going to read it. But to keep us humble, we must remember nothing we can do is so good that it is going to give us a 100 percent readership. We have never measured a story in any kind of publication that gave us 100 percent readership. Never. Even when man walked on the moon. So we are not working from 0 to 100 percent readership but from roughly 3 percent to 80. You get 80 percent readership and that is a minor miracle. That means that every percentage point we lose in the 3-to-80 span is more important. So we must fight for individual readers.

So any backtracking, or wild goose chase, wastes time. The reader has got a certain amount of time that he will devote to your publication. When that time is used up, no matter whether it has been used productively or whether it has been wasted, when that time is done, he is done. Whether he is on page five or 55 or anywhere in between, this is it. So this then is being taken off our productive time. Again, no matter how trifling the amount, the principle is established.

You work with tables. Tables are a part of wht we call expo art. With tables, the important thing we tend to overlook is a label. Have a few words *below* it that tell us what the table is about: "This is a sugar beef production in Dade County, Michigan. Look at thee last three years. Notice in 1976 it was pretty bad with that heavy drought there." And then they can figure it out.

The ancient axiom is pictures above type. Pictures above type, whether it is a table, a graph or actually a photograph.

The next area is pictures. Good pictures are a delight to work with, and bad pictures are the ones we often *have* to work with. Now, pictorial cliches are just as deadly as verbal ones, and much more conspicuous. The first one is Grip-'n-Grin. The next is the check passer.

How do you avoid pictorial cliches? For one thing you are never going to eliminate them entirely. There are times when none of us have time to do this. But if you really want to eliminate them, try this: Write down in 25 words or less, what you want this picture to say. Now nobody wants a picture of me giving someone a plaque or vice versa. Why do we give someone a plaque? Because it is a symbol. Good Old Jim has been with the organization for 30 years, and this is a symbol. But if we do not take a picture of the symbol, if we write out—I want a picture that says Jim has been with this outfit for 30 years--how do we take that? Well, Jim is a bookkeeper; we will get 30 years of ledgers and pile them up. We will get Jim sitting in a 30-year-old tractor or automobile. If Jim's job is one that requires a uniform or a special work costume, perhaps we can get one 30 years old and put it on him. If we are really hurting, we will go down to the daily paper, get the front page of the day that he started work. Have it blown up and make that a background for him. If we want to say "30 years," there are many better ways than saying this with a piece of hardware—a plaque—which really *means* 30 years.

You have got to say beforehand what you want this picture to say verbally. We communicate only in words. We communicate with pictures only when pictures are translated into words because we think in words. So if we start with words, put their idea into a picture, that picture is going to come back into words a little more readily. So this then is where a good picture starts in the editor's mind.

But often the editor's job is to find the picture in the photograph. Now that presumes there is a difference between a photograph and a picture, and there certainly is. A photograph, in case you are interested, is a mechanical record of reflected light. It can be a 100 percent perfect photograph, yet nobody is going to look at it. A picture on the other hand is a communication. While most of our pictures start out as photographs, unfortunately not all of our photographs turn out as pictures. So it is the job of the editor to find the picture in the photograph and to eliminate the noise. So find the picture, then crop ruthlessly. Good typography is like pregnancy, it cannot be tentative. The ancient axiom is, crop ruthlessly; slash, do not slice.

Crop ruthlessly, then enlarge generously. A good picture should always be one column wider than your first think. A bad picture is like a pile of organic plant food the bigger it gets, the worse it smells. Keep it quite small.

Crop ruthlessly and enlarge generously, identify adequately. Every picture must be identified—with its own set of cutlines. Never attempt to identify two or more pictures by a single set of cutlines. It just cannot be done. Cutlines should be as close as possible to the picture, and preferably immediately under it.

But designers do not like cutlines—they clutter up the layout. When designers must use cutlines, they would prefer to stick them all down in one corner to get them out of the way. That isolates them. But no picture is worth its maximum without some kind of identification. We look for a label to give us a clue as to what this was all about. Watch any time you go into an art gallery. The first thing people do is come up and look for the label. Then they stand back an admire it. The label may be nothing: it may say, "fall leaves," or "Opus 47." But even with just a few words, this picture is more meaningful to me. Because this picture must be translated into words before it becomes communication. Every picture must be identified. This applies to portraits as well as anything else. I am sure that at least a few of you have the same annoyance that I do when I read *Time* maga-

zine, with their cutlines that say "President Carter and friend." I do not know who his friend is or if they are just being sarcastic. I want to know who that is, I do not want to guess. Remember any time a reader guesses, he or she is confused because the reader does not quite know whether he is guessing right. And a confused reader is not going to be with us very long.

Now let me put in a few grains of salt. We have two kinds of art which we use in our regular work. We have hand art produced by the hand of an artist versus photography. And these two categories also break down into specific art or news art and into background or mood art. Say you are doing a story on the grasshoppers in South Dakota. If you want to show how bad they are, you show a farmer knee-deep in grasshoppers. That is a newspaper picture and must have a caption. But, if you have a cartoon of a poor farmer and his family cowering with all these huge grasshoppers snarling at them, that is a mood thing. And that does not need identification because that picture really is an ornament. In photo essays we still need some kind of a label to help us. The danger of over identifying is so slight, the danger of under identifying is so tremendous that if we must make a mistake let's make a mistake in the case of over identifying.

We must remember, I is inversely proportionate to D. I is interest and D is Distance. The shorter the distance the greater the interest, the larger the distance the less the interest. Now if we run pictures of grasshoppers, for instance, I assume they would be pictures that you took or some of your people took. You would not take them out of the file, you would not borrow them from somebody in Oklahoma. You would use South Dakota grasshoppers. You would want that distance to be short, to make the interest greater. Now, if this is my farm, I am more interested than if it is your farm. And if this farm is two miles from me instead of 200 miles, again, the inverse proportion is greater. The more we can localize pictures the greater their impact. And the way we localize them is to identify them. This is on John Smith's farm. Sure they are on my farm and they are on your farm. But this is a particular picture, and the more sepcific a picture, the more impact it has on the reader. We do find out, over a long sweep as statistics must be, that when we have any kind of identification, even if we had grasshoppers in a tree, it will make a difference to the reader—that he or she will read with greater interest.

Any time you complicate the issue for the reader,

whether or not he or she reads you right that moment, your chance of holding up for the rest of the publication drops very sharply. Look, there are so many reasons why people will not read your publication over which you have no control: I did not read the newspaper this morning because the newsboy did not bring it to my room, or I was arguing with my wife, or I did not have time. The same thing applies to your publication. We would be stupid if we did not control those things we can. And while the percentages may be small, if you are like me, we fight for the individual reader.

Hand art that you use regularly—expo art or expository art—consists of maps, charts, graphs and diagrams. Maps are useful. In the newspaper business, we always knew that if we had a story coming out of Africa, for example, we had to have maps. You cannot understand the relationship of Rhodesia and Tansania for instance, unless your geography is much better than most. Now we are finding that local maps have even higher appeal and greater use. Sociologists say that as our cities grow larger, our villages get smaller. The village is that part of the city which we use. Or if you are talking about something that happens out in western Iowa, do not take it for granted that everyone in Iowa knows where this village is. Run a little map of the state with a star showing the location. The *Chicago Tribune* does a good job of this. Again, maps cut down the distance and that increases interest. So that is a device for you to use. And, again, we have found that some kind of a label on this expo art (maps, charts, graphs) enchances its interest and increases its value.

Many of us are more involved with tables than we are with graphs, and it is easier to run a table than it is to interpret that table with a graph. But I wonder if tables are really looked at.

Tables are formidable. If you can, reduce a table to a line graph. But remember, there should be no more than three M's of space between two columns. In 10-point type, and M is 10 points. So if you have more than 30 points between Column A and Column B you must use leaders (dots or dashes). Another thing, try to get some kind of an illustration to put in some kind of a whitening element to help make the table, at least if not inviting, a little less uninviting.

Remember people read technical publications, not computers. And there may be a greater compulsion to the reader of technical material to plod through a table. But he or she gets just as tired, they are just as deceived by printed matter

as we are. And we have got to compete against every piece of printing that comes into our reader's home or office, from daily and weekly newspapers and other technical material to *Playboy* and *Hustler.*

In technical publications, one way to solve the problem is to run the chart in the body of the publication and then the tables so that if anybody really wants their more detailed information, they know where to get it.