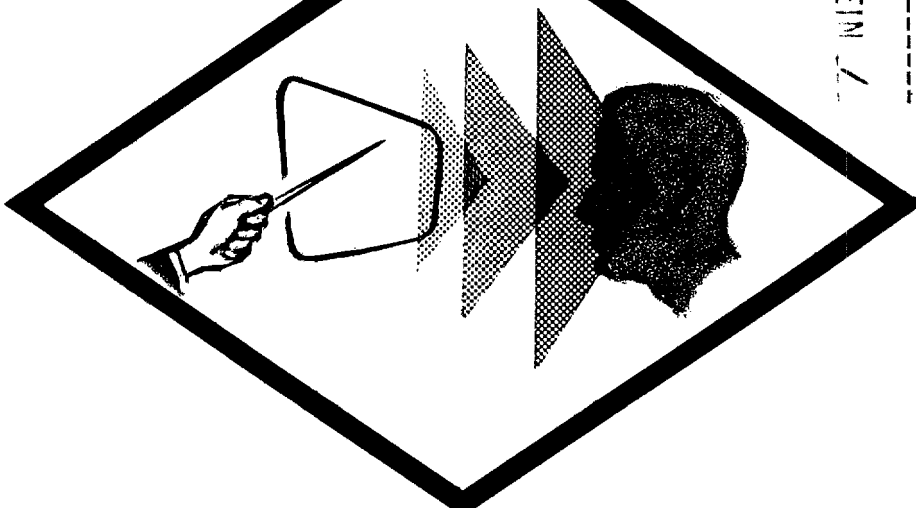


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USING  
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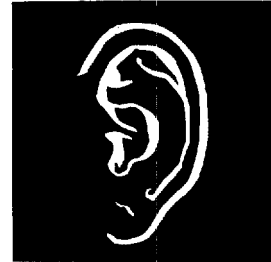
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# USING AUDIO- VISUAL AIDS

In the May BULLETIN, when we ran an article on briefing techniques, we promised more information on the value and use of audio-visual aids. This is it: some general remarks, descriptions of some of the aids you are most likely to use, and some hints on using them.

We all know what Confucius say. Let's revise it a little: One picture can be worth ten thousand words or figures. Not many of us need to be persuaded that audio or visual aids aid. We have seen the proof in the greater interest, our own or in our audiences, when we heard or gave talks which included well manipulated, well designed, well chosen aids. We have also learned that poorly chosen, sloppily prepared, or ineptly handled aids impede rather than expedite interest and comprehension.

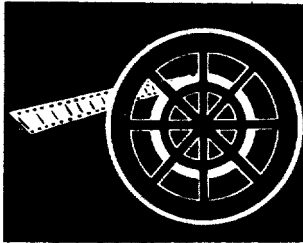


We know too that an "aided" presentation isn't always the best, that there are many things that figures or words do better. For example, only words can tell why something was done, or what the results mean, or what their importance is. And just as too many words can overwhelm understanding, so too many sound-sight devices can drown the hearer-viewer in brightly colored and melodious confusion.



Granted, though, that you are going to use some instructional aids in your next briefing or lesson. Why? Before deciding on what to use or even whether to use it, the reasons should be clear. And these reasons should be one or more of the following:

## AUDIO-VISUAL



**A** Your material demands it, or at least asks for it. Some of the ideas you want to present are such that they can be expressed more quickly, more forcefully, more completely, or more accurately through a chart or film or in some other audio-visual way than through an unaided oral presentation. For example, you are explaining a complicated process; a schematic diagram, a flow chart, a circuit model may be necessary if you want your audience to understand what you are talking about. Or, some of the concepts you must get over are very abstract; a cartoon, a symbol, a quick sketch on the blackboard may give the ideas the concrete dimensions they need for comprehensibility. Sometimes understanding is hindered by the varying background of your audience, leading to a varying interpretation of an important point in your talk; here again a concrete visualization of what you are stressing may be needed to assure uniform understanding.

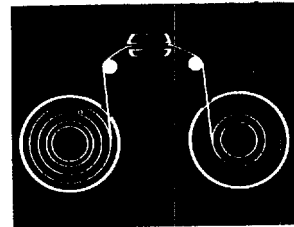
**B** You want to increase interest. Purely verbal exposition can't seize the attention or create the interest that a well designed and graphic visual aid can. (Pitfall: an aid may be so interesting in itself that it distracts from the idea it is expected to emphasize. Thus, the plot or the setting of a movie may be so engrossing that the skills and methods demonstrated in it are never even noticed. Keep in mind the jet designer's disciplined concept: we want the plane to be beautiful, but it must also fly).

**C** Your aim is to insure retention. It seems to be true that most people learn more through their eyes than through their ears. This puts you at a disadvantage in getting your hearers to recall your ideas unless you augment your voice with something for their eyes. Charts which simplify, tapes or records which restate, pictures which particularize, color which attracts give you this extra leverage on the audience's memories. There is a tie between retention and interest, and interest goes most readily to the realistic or concrete or beautiful.

**D** You want to emphasize one of the main ideas of your briefing. You can raise your voice. You can wave your arms or pound the lectern. But a better way is to stress it with a graphic aid. . . . magnify your concept with a projector, color it for impact, add humor with a cartoon, spell it out on the blackboard, mimeograph it and pass it out. Try one. Try two.



What is a good visual aid? (Most of the qualities listed here apply, with needed adjustments, to audio aids as well.)



The good visual aid is simple. Unity marks it. A single idea is its subject. Nothing irrelevant, nothing distracting from that single concept you want to illustrate. No clutter, no elaborate designs which confuse more than they help. Be bold in omitting. Distortion, if accuracy is not sacrificed, can contribute to simplicity and clarity.

The good visual aid is visible. Every detail must be easy to see from any part of the room. Therefore large enough, legible, unobstructed by instructor or equipment or heads. Make them big. Place them high. Use a pointer.

The good visual aid is attractive. Design, color, form, movement, all attract attention, hold it, and aid recall of the ideas illustrated. Caution: Remember that this is an aid we are talking about; it must be subordinate, the vassal to the liege topic of the briefing, not so attractive that it usurps all interest. Remember too that there is a hierarchy among the elements of a visual aid, and color or size of type should not emphasize the subordinate at the expense of the more significant.

The good visual aid is flexible. It must be selected and designed and updated to fit the audience and any changes you make in your presentation. Slides, for example, are more flexible in arrangement than film strips and film strips are more flexible than a movie, where the sequence is fixed. Timeliness is another element of flexibility: a visual aid exhibited out of sequence or displayed too early in the briefing or delayed beyond the point where it is discussed loses most if not all of its usefulness.

The good visual aid is easy to handle. Examples of unmanageable aids are the chart which is too awkward to lift or turn, the map



folded so often it won't lie flat, the picture rolled so tightly it won't stay unrolled, the projector which won't project, the model which suddenly can't be dismantled, the too-small pieces of chalk.

Finally, the really good visual aid is dynamic. Which is not to say that a motion picture is necessarily a better visual aid than a chart or that

a working model is always more effective than a picture. But, whether it moves or not, the aid needn't be static. It can be forceful; it can, if well planned, express vigor and energy.

Some good "rules" for the use of visual aids:

Preplan every aspect--electric outlets if needed, an easel for charts or flannel-board, distribution of handouts, size of room, seating, placement of projector, the screen, lighting, blackboard supplies, table or stand for models, means of darkening the room, and so forth.

Ask yourself what can go wrong (answer: almost everything)--and have an alternative ready: another visual aid or the mental flexibility to get along without.

Rehearse. Re-rehearse. Don't commit platform suicide by trying to use your audio-visuals without practice.

Talk to your audience, rather than to the chart or map or screen.

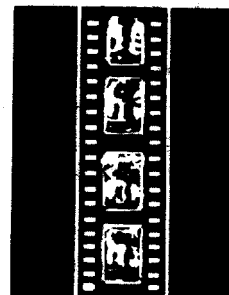
Don't block the audience's view of the visual aid.

Orient them to the meaning of the aid you are using, how and why it is being used.

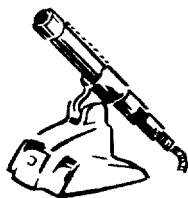
If possible, hide the thing until you are ready to use it... and put it out of sight after you have finished with it.

Get the advice of the graphics or art department in your component. Ask them to go over your material and to suggest a graphic or dramatic way of putting it across.

Don't be diffident or apologetic about the visual aids you use. Demonstrate them with confidence.



#### TYPES OF AUDIO-VISUAL AIDS



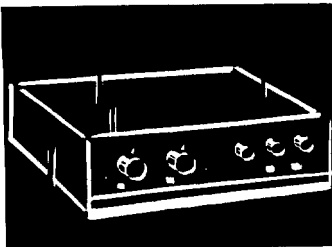
Pictures. Maybe enlarged photographs, drawings slides, clippings from newspaper or magazine, film strips. They may be projected for short or long periods, included in a flannel-board display, posted on the wall or bulletin board, held by the briefer, reproduced and distributed for retention.

Pictures are a very flexible visual aid because they can be arranged in any sequence, and are easily portable. Projectors are usually available for slides and film strips; larger transparent pictures, graphs, charts, maps, etc. can be projected by a Vu-graph or overhead projector.

The blackboard. One of the most commonly used visual aids, it is also one of the most effective and versatile...and one of the most abused. Your chalk can outline, punctuate, underline, and illustrate your ideas...but you can negate all this by blocking the view of your audience while you speak your briefing directly to the blackboard. Some suggestions: Keep it clean; erase all material on the board as it becomes irrelevant. Organize and practice your blackboard presentation beforehand. Write or draw large enough so that all can see. Keep it simple, no clutter. Try colored chalk. Stand back--keep to the side when writing and when speaking--and make sure you are talking to the audience.

Maps. These are an indispensable part of many types of briefings, offering directly or indirectly a vast amount of information. Generally, the larger the map and the larger the scale, the better. Specific types of maps should be used to illustrate limited concepts: demographic patterns, industrial areas, farm product distribution, etc. Often the addition of lines by the briefer is helpful, especially if the scale of the map is too small for the room in which it is shown.

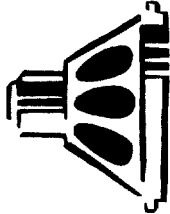
Flannel-board. This category of visual aids includes the standard flannel- or blanket-covered surface on which cutouts with sandpaper are placed; the sheet of ferrous metal to which magnet-backed graphic material will adhere; and the newer hook-and-loop boards, the best of this group. Presentations on these devices are valuable in teaching a sequence of steps, in explaining office organization, and for other purposes.



Motion pictures. Particularly effective because they include both sound and motion. More useful in a teaching situation than in a simple briefing. It will be seldom that you have a film produced

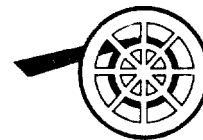
for the purpose of your briefing, but all or part of a film available commercially or from other sources may be useful. Your purpose in showing the film and specific points to be observed during the showing should be explained clearly. The showing may well be followed by a discussion or questions to fix the lesson taught or objective sought.





Projectors. Four broad types: The moving picture projector, familiar to most in the 8mm and 16mm sizes. The slide projector, most commonly taking 35mm transparencies. The Vu-graph or overhead projector using transparent material of a large range of sizes, an illuminated blackboard for which the room does not need to be darkened and on which the briefer can write or draw while the image is being projected (an added refinement is the use of polaroid material and a moving polaroid plate to produce animation and movement). The opaque projector, useful for projecting an enlarged image of opaque objects, maps, pages from books or magazines. Low intensity of illumination. Before using any of these machines a check-out is mandatory, both to assure yourself that you are competent to operate it and to insure that the machine itself is in working order.

Models. Always useful, sometimes invaluable, as when you are presenting a subject which requires three-dimensional perspective. Models may be of three types: solid, to show external features; cross section, transparent, or cut-away, to demonstrate internal features, functions, or relationships; and working models. Any of these may be life size, or larger or smaller than life; they should be to scale. Closely allied to the working model is the mock-up, usually used to demonstrate principles involving motion of complicated systems without being too complex itself. The demonstration of any type of model is as important as the model itself; anything less than well-done will be confusing and harmful. The actual demonstration should be preceded by an explanation of why you are using the model and a description of the setup as a whole. Practice is essential.



Relief, terrain, or topographic models. These are reduced scale models of a specific terrain, target area, factory buildings, etc. They can be as accurate and contain as much information as a map, and by their three-dimensional realism, their color and texture, they help assure a more accurate and realistic grasp of geographic concepts than a map alone is able to produce. Special effort may be required to enable all in the audience to see this type of model. And it is usually very helpful to supplement terrain models with photographs and maps.

Cartoons. Their appeal is instant, the reaction spontaneous. They make their point by humor, satire, exaggeration, absurdity.

Recordings. Disc and tape. While very useful in teaching, recordings probably will not often be used in a briefing. It is one way, though, of bringing another speaker onto the platform, perhaps an eye-witness account, remarks by an expert on your subject, a sample of a language or accent. If you are using a recording, be sure to listen to it before playing it for your audience, be sure its content fits your purpose; plan ahead where it is to be broken and where it fits into your talk. And check out the machine, both its mechanics and your mastery of them. Obvious? Yes, but haven't we all attended briefings where we wondered why tape or other A-V aid was used and why the briefer failed to dominate or at least outwit his mechanical aids?

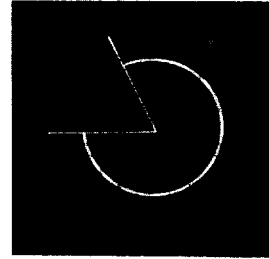
Charts. Since charts are among the most commonly used visual aids, we will go into them more lengthily. A chart may be defined as the presentation of figures (quantities) in graphic form. It should involve more than merely converting a set of figures into a drawing. It means presenting a picture which will give the viewer an accurate understanding of a particular set of "figure" information, a picture of the comparisons or relationships which he would otherwise have to search for--and perhaps fail to see. A well designed chart communicates quickly, showing the main features of the data at a glance; it is forceful, carrying more emphasis than text or tables; it is convincing, demonstrating the point instead of merely stating it; it is revealing, often disclosing relationships which wouldn't otherwise have been noted.

Before you rush out and convert your entire briefing to charts, remember that these plus qualities belong to good charts. Many charts are uninviting because poorly thought out and prepared. Effective design requires care and attention. Remember too that a graphic presentation just doesn't fit some data: rough estimates, for example, may seem more precise on a chart than they really are.

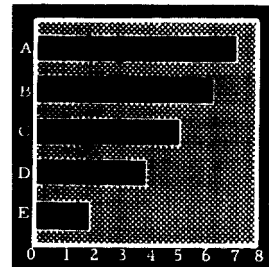
A chart may be a map showing geographic distribution, or a diagram showing how a quantity is distributed schematically. These two types are relatively limited in usefulness, though sometimes they are precisely what you need. Other types are more widely applicable: pie, bar, column, curve (line), and surface charts.



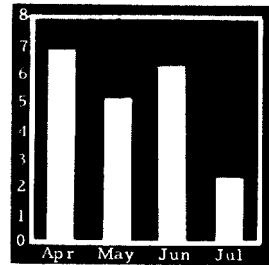
A pie chart, a circle divided into segments, is popular because it looks simple and non-technical, and because it is excellent for its one purpose: showing component parts of a whole.



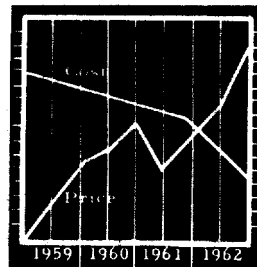
The bar chart, like the pie chart using only one scale but far more versatile, measures quantities by horizontal lines.



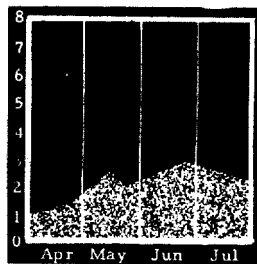
The column chart looks like a bar chart turned on end, but has two scales, one measuring across (usually time) and the other measuring up-and-down (usually quantity). Each point on a two-scale chart thus has two values.



Another two-scale chart is the curve chart or line graph, the most versatile and useful of all. Curves are usually better than columns when there are a large number of closely spaced points to be connected, or when there are several series of points, or when the level changes only slightly from one point to the next.

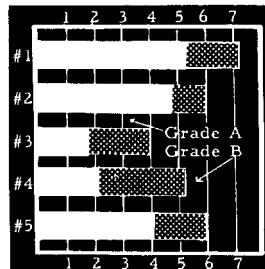


Surface charts, like curves, connect each plotted point to the next, and like columns, join each point to the base. . . . using a continuous shaded band or surface.

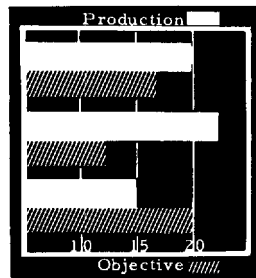


Each of these five basic types of chart can be varied to adapt to your needs. Take the bar chart:

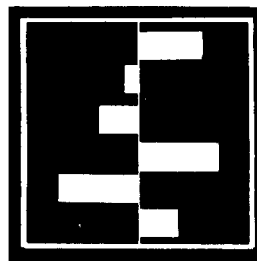
it can be divided to show component parts



or doubled for direct comparisons



or arranged to show deviations from a norm



Many other variations are possible in the bar chart and in the others, except the pie chart.

Making the most of charts demands a decision, before the work is started, as to what type of chart best fits the material you want to present. It also requires a determination to be simple, direct, clear, and accurate.

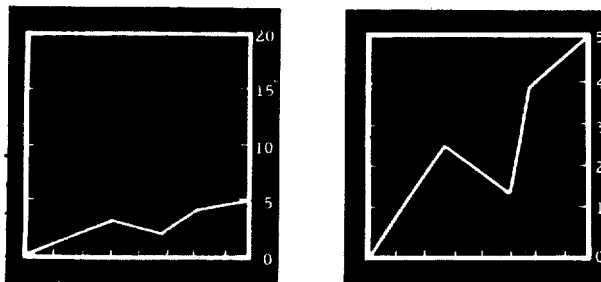
Directness--choosing a form which puts the emphasis where it belongs and subordinates everything else...designing the chart so

that the viewer's attention is drawn immediately to the fact you want him to see...sharp and dramatic focus achieved by color or design.

Simplicity--organizing functionally (don't make your material seem more complicated than it is) and avoiding useless detail (sharpen captions, omit needless scale markings, don't try to cover too much in one chart).

Clarity. Directness and simplicity will insure visual clarity. A chart must also be clear in meaning, clear to the audience, not just to the briefer. This may involve explanation of unfamiliar concepts, translation of unfamiliar terms, omission of unnecessary information, a compromise between technical exactness and non-technical clarity.

Accuracy. This goes much further than using accurate data and plotting them correctly. To be truly accurate a chart must give an accurate impression. The impression your chart gives is influenced by the mental make-up of your audience. It is also affected by the mechanical treatment of the chart, principally its scale and "frame", and this you can control. The feature of chart design which has the most direct effect on the impression produced is the selection of the scale. An example or two may be worthwhile. Here are the same data plotted on two different scales; each is accurate, but notice how the choice of scale affects the impression given.



Which of these two correct versions do you choose? Your answer depends on your judgment of the situation and the impression you want to give. A careful and thoughtful decision on this should precede the making of each chart if you want to avoid giving an inaccurate and possibly misleading impression.

Another mechanical detail affecting the impression given is the "frame" of the chart: its size and shape, the presence or absence of other data on the same chart, the nearness of other charts with which this one may be compared. Every artist knows that the frame affects the picture, and every chart maker should remember this factor in preparing and presenting his charts.

Charts, like material on the blackboard, must be large enough and high enough to be seen easily by all members of the audience. Care should be exercised not to obscure the charts by body or hand; usually a pointer serves best. A series of charts may be attached together at the top and shown one at a time (flip chart); or the various parts of one chart may be covered and revealed one at a time (strip chart). Charts with acetate overlays may be used to add a third dimension to components of equipment. All charts should be covered before they are used and after you have finished with them. In an emergency most briefers can prepare their own charts; if there is more time the charts will undoubtedly benefit from the work of a person trained in graphics.

#### CONCLUSION

An idea conveyed through two senses (hearing and sight) rather than just one is more likely to hold attention, excite interest, and insure its own retention. This is the rationale of audio-visual aids. Remember, though, to keep them in their place, subordinate to topic and speaker. Need is the criterion. And the criterion of need? Your subject-matter and your audience. Visual aids poorly done are expensive, not only in the time (money) spent preparing them, but because they may fail to tell your audience all you intend or something different from what you intend. An audio-visual aid, if worth doing, is worth doing well, and that means it will be simple, clear, easily visible, accurate, attractive, flexible in use. If you have some ideas but don't believe you can express them graphically, get advice and help from component graphics departments.