Use of Principles of Composition in Selecting Type Fonts and Graph Types in Business Graphics Applications
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Abstract

Business graphics systems such as SAS/GRAPH have made high quality graphics available to business professionals of varying levels. Many of these professionals have never had any graphics training, and yet in using the easily accessible new software they are preparing important graphics presentations. The persuasiveness of these graphics may be enhanced by use of basic graphics design principles. Some of these principles have been described in SUGI proceedings before (notably, the selection and use of color was discussed at length at SUGI '82); however, principles of composition are rarely taught to business professionals who prepare business graphics.

This paper will describe three elements of composition in terms of three paradigms and will illustrate their use in examples culled from the art world and as applied to computer graphics. Use of these principles in selecting type fonts and graph types should allow professionals to prepare more persuasive graphics, without suffering from conflicting messages from subliminal sources.

Principles of Composition

How frequently we hear the old cliche of two people in an art museum, standing in front of a piece of modern art and saying "Yes, but what does it mean"? Graphics, which is the basis of visual art is like music; just as you must develop an ear for music to be a good composer and evoke desired feelings, so must you develop an eye for graphics if you wish your graphical presentations to achieve their desired effects. Most professionals have neither the time nor the interest to become expert graphic designers; however, with only a little time and a few principles to follow, many people can improve their graphic presentation skills, and thus improve the effectiveness of their graphic communication. No one wants to spend their time preparing graphics only to hear, "Yes, but what does it mean"? This paper will discuss a few graphics principles not frequently discussed elsewhere.

Principles of composition are concerned with the choice of graphic elements, and now they are arranged on a page. Graphic elements may be arranged in horizontal/vertical, curved, or diagonal arrangements. Additionally, the elements themselves may have horizontal/vertical, curved, or diagonal characters. As a paradigm for each of these categories, we will choose the following symbols: the square, the circle, and the triangle. Below we will discuss the psychological characters of these elements.

Horizontals and Verticals: The Square

Strong horizontal and vertical lines are the "cerebral" elements. They connote solidity, stability, the conventional and the mechanical. Use graphics with strong horizontals and verticals to convey to your audience that you are talking about something that is solid, stable or conventional. A key example of a business graphic of this type is the bar chart. Bar charts imply stationary and discrete data. Additionally, a strong horizontal or vertically defined font such as gothic, will contribute to this sort of atmosphere. Blocks of text, with justified edges will also contribute to this atmosphere.

Curves and Swirls: The Circle

The curving elements are frequently described as having a "sensual" aspect. They may be used to advantage when you wish to connote continuity, a flow, or friendliness. Examples of this paradigm applied to business graphics are the pie chart, the star chart, and splined or smoothed plots. Fonts with these characteristics are frequently described as scripts and usually look like cursive or long hand writing.

Diagonals: The Triangle

Strong diagonals in a graphic design are paradigmatic of a "dramatic" design. Diagonals will connote the dynamic, the modern, as well as indicating strong, swift and sure movement. We have all seen the dramatic effects of diagonals in graphics as diverse as sales trends to cereal boxes. A strongly sloping sales trend line (whether up or down) is as sure to grab attention as the diagonal label slapped on the cereal box which reads "New! Improved!". Joined, as opposed to smoothed, plots are examples of this use. So too, are the italic fonts, with their sloped descenders and ascenders, which are good fonts to use in labeling graphics that tell a dramatic story.

Examples:

On the following pages we list some examples of graphics of the various paradigms. In our visual presentation, we usually include selections culled from renaissance art, photography, and from modern art. Unfortunately, reproduction
quality prevents us from including them here. Interested readers may wish to look them up, and see if they can spot the different paradigms and explain their effects.

Renaissance Art
CEREBRAL - The School of Athens, Raphael.
SENSUAL - The Holy Family, Michaelangelo.
DRAMATIC - The Deposition, Raphael.

Photography
CEREBRAL - Pillars of the Parthenon, Edward Steichen.
SENSUAL - Three Pears and an Apple, Edward Steichen.
DRAMATIC - Radio City Montage, Edward Steichen.

Modern Art
CEREBRAL - Broadway Boogie Woogie, Piet Mondrian.
SENSUAL - Dance, Henri Matisse.
DRAMATIC - The Evil Genius of a King, Giorgio de Chirico.

Here are some examples in selecting type fonts for business graphics.

Business Examples: Type Faces
CEREBRAL - SAS/GRAPH DUPLEX
SENSUAL - SAS/GRAPH SCRIPT
DRAMATIC - SAS/GRAPH TITALIC

HOW TO SELECT TYPE FACES

USE THIS KIND OF TYPE FONT WHEN YOU WISH TO SEEM CONVENTIONAL, SOLID, AND STABLE.

Horizontals and Verticals: the Cerebral

HOW TO SELECT TYPE FACES

Use this kind of type font when you wish to seem sensuous, friendly, and evolutionary.

Circles and Swirls: the Sensuous

HOW TO SELECT TYPE FACES

USE THIS KIND OF TYPE FONT WHEN YOU WISH TO SEEM DYNAMIC, MODERN, AND DRAMATIC

Diagonals: the Dramatic
Here are some examples in selecting graphs for business graphics.

**Business Examples: Graphs**

**CEREBRAL** - SAS/GRAPH VBAR Chart

**SENSUAL** - SAS/GRAPH Splined Plot

**DRAMATIC** - SAS/GRAPH Joined Plot

**HOW TO SELECT THE PROPER GRAPH**

**MYTHICAL MANUFACTURING COMPANY, INC.**

**USE THIS GRAPH FOR INDICATING SOLIDITY AND DISCRETENESS**

Horizontals and Verticals: the Cerebral

**USE THIS GRAPH FOR INDICATING EVOLUTION AND CONTINUITY**

Circles and Swirls: the Sensuous

**USE THIS GRAPH FOR INDICATING DYNAMIC CHANGE**

Diagonals: the Dramatic
Mixing Graphic Elements: Graphic elements can be mixed together in one design; however, great care must be taken to do so in a pleasing manner. Frequently, new users of a graphics product will do extensive, and indiscriminant mixing of graphic elements. The reasons behind these tendencies are many, but it is worth mentioning some of the more salient ones.

Interest in the New
Many users will mix diverse elements together because they now have the power to do so. Older software made available a much smaller selection of elements. The new user wants to try all the new capabilities and become familiar with all the options. The result is that the graphic elements get more attention than the information which they attempt to convey. The message is lost at the expense of the medium. The resulting design frequently looks like the title page of a Victorian novel (itself an example of a society overwhelmed with its new technologies) and on more tragic occasions may approach the quality of a paste up-ransom note.

Examples from the Manuals
Another reason why users frequently combine too many compositional elements is that their chief examples are usually from the manual. Unfortunately, the user's goal is not to display the different types of elements, but instead to tell some story, whereas the manual's objective is to display the elements themselves.

Lack of Graphic Arts Training
In many offices, the people producing graphics do so in addition to other routine duties. These people are not expected to be graphic arts experts, and frequently have no graphic arts training at all. Their role in producing graphics is considered a passive one: collect some data enter it into a graphics system, push a button, and pull out a graph which speaks for itself. Unfortunately, few graphs speak for themselves, and no graphics will evoke their full potential of desired effects when compositional design is left to chance. An afternoon of training can improve the success of your graphics by a tremendous amount.

Conclusion:
Acquainting yourself and other graphics producers at your installation with principles of composition can improve the quality and success of your graphics. Basic principles are simple, visual, and easy to learn and apply.

This is a Ransom Note.
It is an example of what might happen if you mix type faces indiscriminately.

Don't do it or your message will get lost in the clutter.

Select and mix type faces with care.