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ABSTRACT

The focus of this study was to measure the communicative power of business symbols with a business audience. A panel of three people selected 15 appropriate business symbols which then appeared on a questionnaire which showed each symbol with a blank space for the respondent to provide a one word or short answer of the symbol's meaning. Eighty-eight first year Master's of Business Administration (MBA) students enrolled at Penn State University were give the questionnaire. The responses were tabulated by one person who classified the answers into five categories: perfect, close, arena, inappropriat. . or no response. Implications of this study include: people mistake or do no know the meaning of many symbols; subjects make rapid judgements about the meaning of symbols and, as a result, people should not rely on symbols to convey in-depth or critical meanings as they do not convey accurate meanings; and that image perception is relative to the context in which it is viewed. A next step with this study is to measure recognition of those symbols with international audiences. The questionnaire and responses are included in the appendix. (Contains 7 references.) (JLB)

Using Symbols in Business Presentations: How Well are they Understood?

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Background For The Study

This study is an outgrowth of a previous study conducted by Griffin and Gibbs (1993). That study showed that a homogeneous audience of business people did not understand many common visual symbols. This study sought to replicate the earlier study and delve further into the study of symbols used in business. It was hypothesized that even though business people report participating in about one business presentation per month (Griffin, 1993), they are not, necessarily, visually literate when it comes to understanding symbols. The subjects used in this new study were first year Master's of Business Administration students enrolled at Penn State University.

Previous Research

There is an emerging body of research that says that symbols may not be the most efficient method of communication for the general population. Gustafson and Roettger (1991) reported significant differences in pictorial recognition resulting from picture context and complexity. Additionally, Dewar and Ellis (1977) and later Mackett-Stout and Dewar (1981) indicated that visual symbols do not make a complete language. Mackett-Stout and Dewar (1981) warned that the rapid proliferation of symbols has resulted in a variety of symbols that mean the same thing. All of this research was meant to warn visually minded people to be careful of relying too heavily on a visual language.

It should be noted that research exists to counter this philosophy. This pro-symbol evidence is cited by Tierney and King (1970) and Pettersson (1989).

In the Griffin and Gibbs (1993) study the researchers tested 48 black and white symbols for recognition. The study focused on a random collection of symbols including street signs, computer notation and other clip art drawings. The symbols were

not necessarily those used in business presentations, they were simply readily available symbols in general use. The Griffin and Gibbs study had two major conclusions. First, symbols were not highly recognized by the North American subjects sampled in the first part of the study. Secondly, an international audience sampled in the second part of the study also performed poorly at identifying the symbols. The study implied that symbols are not an international language.

How This Study Was Conducted

The focus of this study was to measure the communicative power of business symbols with a business audience. A panel of three people was convened to select appropriate business symbols for the study. The panel selected the clip art collection from Software Publishing's Harvard Graphics business graphics software. This clip art was selected because it was readily available and fell into the category of named symbols. Named symbols are clip art items where the artist names each piece of clip art so that a user can easily identify it. The Harvard Graphics collection has a separate name assigned by the computer artist to each of the symbols included in its clip art library. It is this name that describes the symbolic intention of the artist. While the panel did not always agree with the name assigned by the computer artist, the name at least provided a base definition from which to begin the study. The fifteen symbols chosen are shown in Appendix A.

The questionnaire showed each of the symbols and provided a blank space for the respondent to write a freeform definition of the symbol's meaning. The respondents were asked to provide a one word or short answer for each symbol. Eighty eight subjects were used in the study. One questionnaire was discarded from the sample because the responses were inappropriate. The 88 questionnaires were tabulated by one person to control the classification of the answers. Responses were classified into one of five categories: PERFECT, CLOSE, ARENA, INAPPROPRIATE or NO RESPONSE.

Responses were categorized as PERFECT if the response exactly matched the name provided by the artist. In a few cases the PERFECT response was expanded to include very similar replies. For example, a broader range of definitions were used for the symbol semi shown in Figure 1.

Figure 1
Semi

A response to this symbol was determined as PERFECT if the words tractor-trailer, 18 wheeler or semi were used. While the researcher originally intended to accept only the named answer semi, it was felt that the named title was not appropriate. Broader definitions

were accepted for semi, tanker, and oil drum. All other symbols had to have the correct name.

The second classification was CLOSE. This was used if the answer given by the respondent was parallel to the named symbol. Let us use the thumbs up symbol, shown in Figure 2, to look at the Close definition.

Figure 2
Thumbs up

Examples of the close definition for the thumbs up symbol were O.K., excellent, approval and good job.

The third classification used in the study was IN THE ARENA. Definitions in this category were responses that broadly described the symbol. For example, consider the Thumbs Up symbol shown in Figure 2. Responses that were considered in the arena were cool and winning. These responses were clearly skirting the symbol's meaning, they were close, but only in the arena. These definitions were not correct or communicative definitions.

A fourth class was called INAPPROPRIATE. Definitions put in this category were clearly seen as not correct. Again for the thumbs up symbol shown in Figure 2, inappropriate responses were: Fonz, Ryder Cup, hitchhike and help. It is hard to guess how respondents came up with these definitions. Many of the responses in this category left the researcher scratching his head.

The final category was NO RESPONSE. This category was for questions that were left blank or had a ? for the response.

All of the category responses for the symbols are shown in Appendix A.

What Can Be Interpreted From The Study

Like many studies, this one poses more questions than it answers. However, a look at the symbols that were exceptionally difficult to understand, as well as those that were particularly easy, can help draw conclusions about relying on visual language. Let us first look at the symbols that caused difficulty in understanding.

Two symbols that were confusing to the audience are shown in Figure 3.

Award

People

Figure 3
Two Confusing Symbols

Both the symbol titled award and the one titled people were difficult for the test subjects to interpret. The responses to these two symbols are shown in Figure 4 below.

Response	Award	People
Perfect	6	24
Close	31	24
Arena	19	37
Inappropriate	28	4
NR	4	0

Figure 4
Responses To The Award and People Symbol

Notice there is a similar distribution of responses in each classification category from Perfect through Inappropriate. While it is true that many subjects recognized the symbols correctly, it is also surprising that so many subjects could not identify the symbols. Some of the varied responses for the award symbol were: keyhole, bottle, can opener or funeral. The People symbol was viewed as: a jury, large nose, talking heads, and movie theater. Clearly the original artist never intended these meanings. These interpretations given to these two symbols indicate how confusing the meaning of symbols can be.

The most difficult symbol to interpret in the study was the monetary symbol Peseta. This symbol is shown in Figure 5.

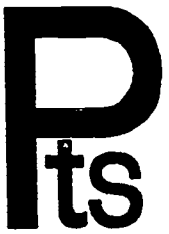
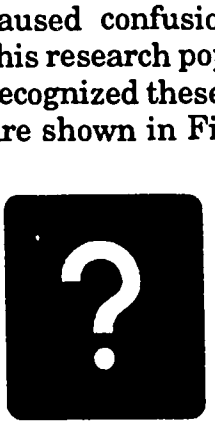


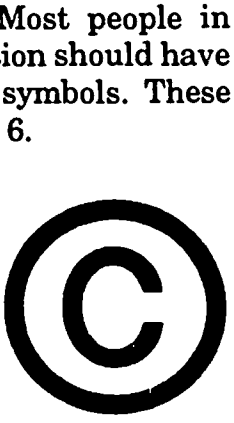
Figure 5
Peseta Symbol

The peseta is the basic monetary unit of Spain. While this symbol is not commonly known, the subjects in this population (business people) should have been aware of the symbol. Seeing this symbol out of the visual context of money possibly confused many people. Definitions given for this symbol included: pints, capitalization, Pittsburgh and points. In fact, points was the most popular response; it accounted for 70 of the 88 responses.

Two additional symbols also caused confusion. Most people in this research population should have recognized these two symbols. These are shown in Figure 6.



Information



Copyright

Figure 6
Two Additional Confusing Symbols

The information symbol and the copyright symbol are not strictly business symbols, but rather are informational signs. Non business people will encounter these symbols almost as often as business people. These commonly used symbols were recognized most of the time. However, when they were misidentified the definition was not even close to the intended meaning. The copyright symbol was misidentified 48 times and the information symbol was misidentified 38 times. This is higher than one would expect for this population. These are two symbols that the business population should be able to readily identify. Confusion over the copyright symbol was also noted in the Griffin and Gibbs (1993) study. The reason for this confusion is probably due to the large size of the symbol used in the study. A smaller version of the symbol may have been recognized.

The most consistently recognized symbols in the study were the Check and the Copier. These symbols are shown in Figure 7.

Copier Check

Figure 7
Best Recognized Symbols

The copier was recognized by 68 subjects while the check was recognized by 77 of the subjects. There appears to be enough detail on these symbols to make them easily to identify. There was little confusion in their interpretation, although it does seem strange that there was not 100% recognition in our test population.

Implications Of The Study

While this study was intended to look at business visuals only, the implications formed from this work are very similar to those in the 1993 Griffin and Gibbs study. First, it is obvious that people mistake or do not know the meaning of many symbols. Symbols do not have the power of a written language or the spoken word and therefore should not be relied on to convey accurate meaning. Clearly the confusion over the copyright symbol, information symbol and peseta symbol showed that these symbols fall far short of being considered as parts of a common language.

The second conclusion of this study also follows a conclusion reached in the earlier Griffin and Gibbs study. Subjects make rapid judgments about the meaning of symbols. They often do not look at the visual in great detail. Rather, they take a superficial look at the symbol and then make a determination of the meaning. Visual experts should not rely on symbols to convey in-depth meaning or ideas which are critical to an outcome. Symbols do not convey accurate meanings.

A third conclusion that can be drawn is that image perception is

relative to the context in which it is viewed. The discrepancies over the copyright symbol and the information symbol appear to be caused by a context problem. When these symbols are removed from their normal context they are difficult to identify.

Confusion over the British pound symbol and the Spanish peseta is a context problem of a different sort. The business students who were the subjects of this study should have been informed about the international nature of business. But the students had difficulty recognizing international monetary symbols. If you examine the data for the pound and the peseta in Appendix A you will see that the students are obviously better informed about the symbol of the British monetary system than they are about the Spanish monetary system. The evidence of this is that the subjects recognized the British pound symbol far better than they recognized the symbol for the Spanish peseta. The peseta is not a major world trading currency like the British pound. This strong awareness of Britain is common in today's business schools.

What Is Next

The next step in this study is to measure recognition of these symbols with international audiences. Before doing so, some time will be spent refining the symbol set to choose the most appropriate business symbols from the current questionnaire. Once the symbol set is decided upon it will be tested in several international locations. It is the hope of the various researchers involved in this international study that we will be able to draw conclusions about the efficiency of using symbols in international business communication. There is a great deal more to learn.

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Pettersson, R. (1989), **Visuals For Information**, Educational Technology Publications, Englewood Cliffs, New Jersey

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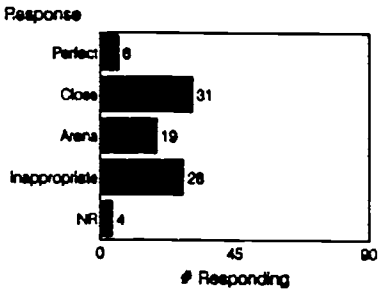
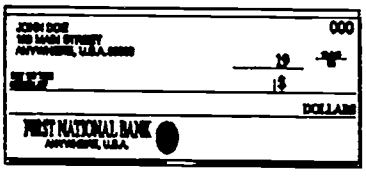
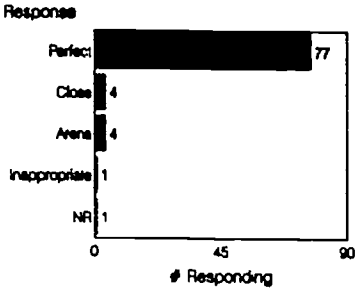
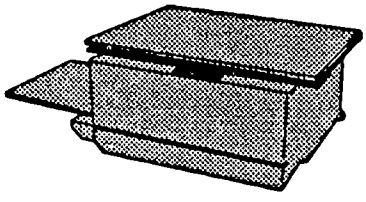
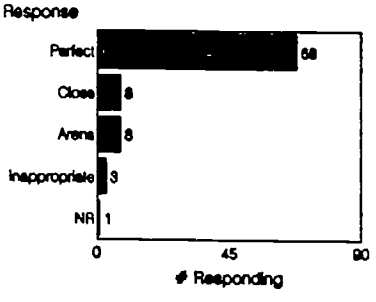
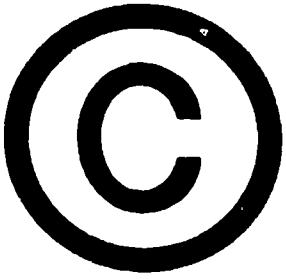
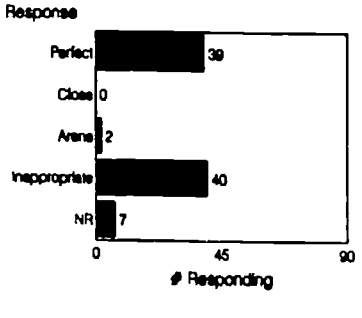
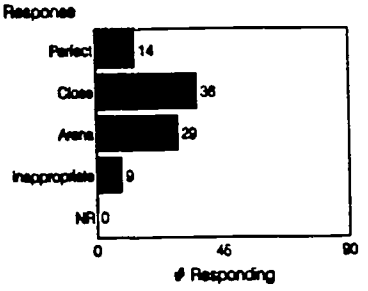
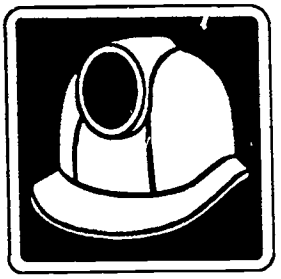
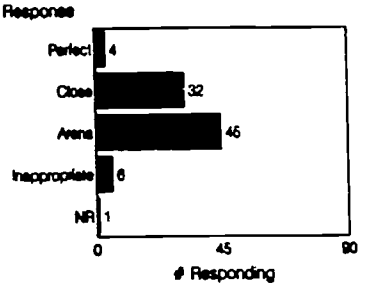
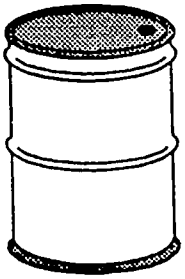
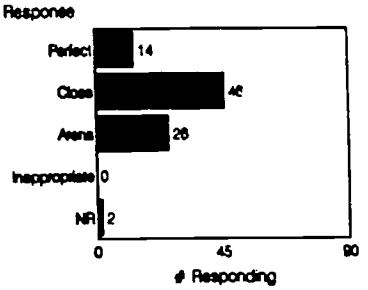
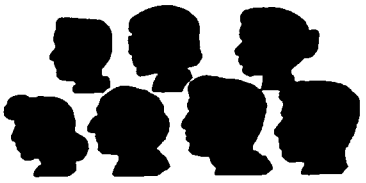
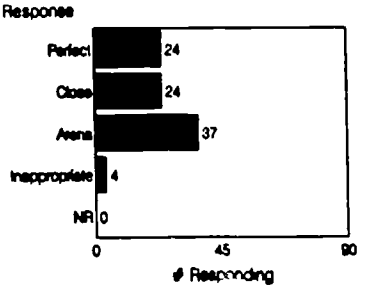
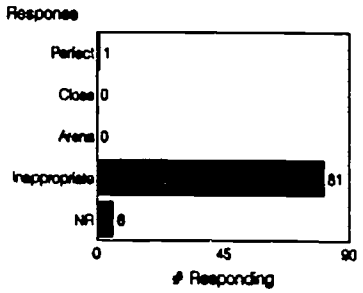
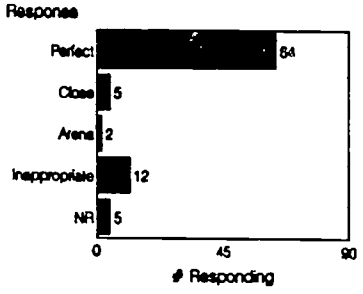
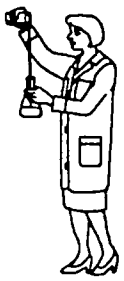
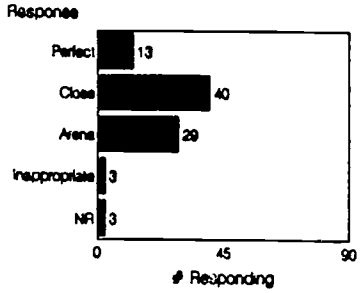
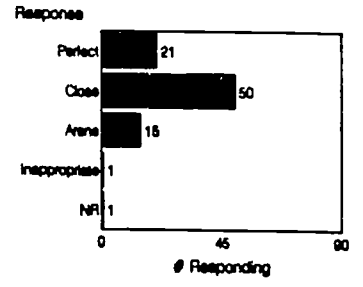
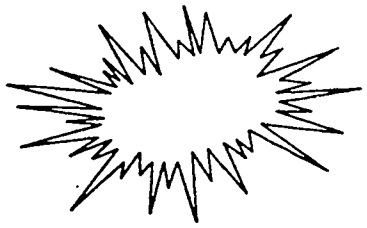
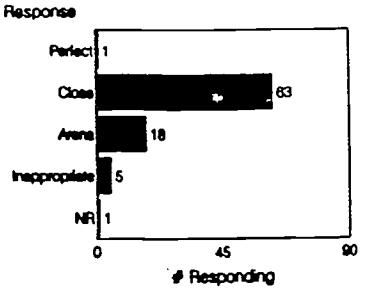
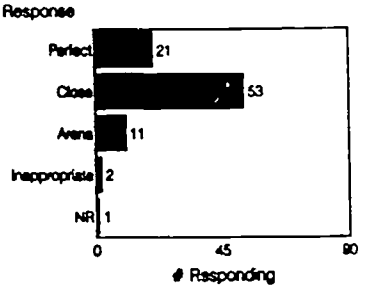
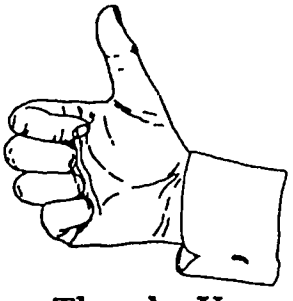
Appendix A

Symbol	Results
 **Award**	
 **Check**	
 **Copier**	
 **Copyright**	

Symbol	Results
 Information	
 Mining	
 Oil Drum	
 People	

Symbol	Results
Ptas **Peseta**	
£ **Pound**	
 **Scientist**	
 **Semi**	

Symbol	Results
 **Star**	
 **Tanker**	
 **Thumbs Up**