ABSTRACT
        Four different principles of visual manipulation
constitute a minimal list of what a visually "literate" viewer should
know about, but certain problems exist which are inherent in
measuring viewers' awareness of each of them. The four principles
are: (1) paraproxemics, or camera work which derives its
effectiveness from an analogy to the real-world domain of spacial
communication; (2) false continuity, a basic premise behind most
narrative editing which joins two shots together in an illusionistic
coherence; (3) implicit propositionality, in which an analogy is
implied by juxtaposing two or more images; and (4) associational
juxtaposition, a core strategy in advertising in which an image of
the product is juxtaposed with an image of a person, object, or
situation evoking positive feelings. The major difficulty in
measuring these aspects of visual literacy is determining how to tap
into these processes without resorting to verbal or written
responses. Attempts to succeed must ensure that measurement of visual
literacy is not confounded by linguistic competence. One technique
features classification, or tasks involving some form of sorting of
images, and it is currently being used in a variety of ways to
measure these principles. Finally, a procedure has been developed to
gauge the extent to which viewers are aware of the uses of
associational juxtaposition in magazine advertising. Future research
in this area can explore the ways prior experience leads to greater
awareness, and to what extent visual literacy makes viewers more
resistant to visual manipulation. (HB)

A VISUAL TEST FOR VISUAL "LITERACY"

by

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To speak of visual "literacy" is not only to lapse into sole:ism but also to invite acceptance of various false analogies between the way visual communication works and the way language works. But there is no commonly-accepted substitute for this term, and so, very reluctantly, I am going to use it myself. The aspect of visual "literacy" I am interested in has to do with viewers' awareness of the variety of visual devices which movies and TV programs and advertisements employ to manipulate their audiences' responses. More specifically, I will be using the term visual "literacy" to refer to viewers' explicit awareness of the principles and methods of visual manipulation.

My aim in this paper is two-fold. First, I want to give a brief overview of four different principles of visual manipulation which, I would suggest, constitute a minimal list of the kinds of things one might expect a visually "literate" viewer to know about. My labels for these four principles are as follows: (i) paraproxemics; (ii) false continuity; (iii) implicit propositionality; (iv) associational juxtaposition. After I have discussed these four principles, in the second part of the paper I want to examine the problem of measuring viewers' awareness of each of them. The particular question which I will be dealing with in this latter part of the paper is the following: In attempting to measure a person's visual knowledge, how do we make sure that we're not simply measuring her/his

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ability to verbalize about images instead?

I. What Should a Visually "Literate" Viewer Know?

(i) The paraproxemic principle. I am borrowing the term "paraproxemics" from Meyrowitz (1986), who used it to describe camerawork which derives its effectiveness from an analogy to the real-world domain of spatial communication or "proxemics." For example, it is commonly assumed that the audience's sense of intimacy with an on-screen character may be enhanced if that character gets more close-ups than the others, by analogy with the real-world association between physical closeness and psychological intimacy. The effectiveness of the paraproxemic principle has been demonstrated in an experiment by Galan (1986), who found that close-ups and subjective shots (i.e., shooting "through the eyes" of a fictional character) enhanced viewers' identification with characters in commercials -- and, further, that viewers did not seem to be aware of the visual variable which was being manipulated.

Since the devices tested by Galan are used quite commonly in TV advertising, we may assume that one benefit of "literacy" in this area would be an enhanced immunity to such ploys on the part of advertisers. However, the implications of an awareness of paraproxemics are likely to be most critical not in advertising but in certain fiction films and TV programs. As several scholars in the area of film studies and related disciplines have pointed out (see Prince, 1988, for a review),

camera positioning, including subjective camera style, has been routinely associated in Hollywood cinema with a predominantly male point of view and the objectification of females. The camera typically "allies" itself with the male protagonist, while his female counterpart is presented from his perspective. A grotesque extreme of this visual style occurs in slasher movies, in which we -- the viewers -- are repeatedly invited to witness the spectacle of a cringing female victim through the eyes of the male aggressor. It is this kind of application of paraproxemics that we might expect to be most salient to a visually "literate" viewer.

(ii) <u>False continuity.</u> The principle of "false continuity" is one of the fundamental premises of the illusionistic power of film and television. It is the basic principle behind most narrative editing: two shots joined together in the context of a broader narrative are "read" by the viewer as being part of a coherent stream of space, time, and action, even if the shots were in fact taken at widely separate times and places or if the actions within them were completely unrelated in reality. This principle is equally a part of fictional and non-fictional narratives, but it is the non-fictional case in particular which raises troublesome questions of visual manipulation and the need for visual "literacy."

In its most extreme form, this principle may be observed in operation in those situations in which shots of non-fictional

events are assembled after-the-fact for inclusion in a
documentary, newscast, interview program, etc. For example, it
has been alleged that, in a CBS interview with William
Westmoreland regarding the accuracy of enemy-troop estimates
during the Viet Nam war, a shot of Westmoreland nervously licking
his lips was shifted from one part of the interview to another,
giving the impression that a certain question had made him
especially nervous. What is probably a more typical instance of
the kind of misrepresentation which such a situation can lead to
is illustrated very nicely in a scene from the film Broadcast
News (1987, dir. James L. Brooks) in which an unscrupulous TV
newsman "enhances" the impact of a rape-victim interview through
the insertion of a teary-eyed reaction shot of his own face taped
after the actual interview .was over. Such after-the-fact taping
of the interviewer's reactions, as well as her/his questions, is,
of course, standard practice in TV news. However, the area in
which the principle of false continuity is most consistently used
for deliberately manipulative purposes is probably that of
political advertising.

It is a common procedure in political ads to portray the
candidate addressing an audience of admiring representatives of
the public. The intention, of course, is to convey an image of
spontaneous approbation of the candidate's remarks. Often,
however, the conjunction of candidate and responding public may
be more of a product of editing than of the real-life encounter
between the two. For example, in an ad used during George Bush's

1980 campaign for the Presidency, a rousing speech by Bush is
intercut with shots of a wildly enthusiastic audience, but, when
one examines these images carefully, it becomes evident that Bush
is actually delivering his remarks to a much smaller group of
people than the large, cheering crowd which appears in the
reaction shots.

        (iii) Implicit propositionality. What I am calling
"implicit propositionality" is, arguably, one of the two basic
principles of the kind of visual manipulation typically practiced
by print and TV advertising. (The second major principle is the
next item on our list, associational juxtaposition.) The origins
of the forms of advertising in which this principle is employed
can be traced back to early Soviet filmmakers' experiments in
visual propaganda (see Prince, 1990). For example, in
Eisenstein's Strike, a scene of striking workers being massacred
by government troops is punctuated by shots of animals being
butchered in a slaughterhouse. We may assume that in this
instance even the most obtuse audience members must have been
able to discern that an analogy was intended. Nonetheless, the
crucial point here is that the analogy is implicit. As many film
scholars have pointed out, movies have no formal equivalent of
the word "like" (Clifton, 1983). In fact, more generally, visual
communication has no explicit symbols for signifying any type of
relationship among two or more events. Instead, as in the
example from Strike, attempts to express a propositional
statement through visual means -- i.e., to assert an analogy or

other type of relationship -- typically take the form of simple

juxtaposition of two or more images, from which the viewer has to

infer the underlying message.

This lack of explicitness of claims or propositions made

by visual means makes it possible to use images in putting forth

propositions which might appear exaggerated, false, or ridiculous

if put in words; and it has been argued that it is this

characteristic of implicit propositionality which has led to its

widespread adoption in the area of visual advertising (Marchand,

1985). Indeed, there are certain instances in which the use of

implicit propositionality can be seen as a deliberate strategy

for building deniability into false advertising. For example, a

"health-food" manufacturer who was criticized for his advertising

for a product with no demonstrable benefits, pointed out that the

ads in question -- featuring a bottle of body-building pills next

to an image of an extraordinarily muscular man -- never claimed,

in words, that taking the product would lead to any specific

results. More typically, however, implicit propositions of this

sort, i.e., implied cause-effect claims, are likely to be found

in ads in which an explicit verbal statement of the message would

likely be seen as an exaggeration rather than a dowright lie.

Obvious instances of this kind of thing occur in advertising for

perfume or cologne and for liquor, in both of which the product

is commonly shown next to scenes of romantic success or sexual

conquest. Less obviously, implicit visual claims of causality

have also become an increasingly common element in political

image-making, as in the 1984 Reagan re-election campaign's visual
linkage of Reagan with scenes of economic rebirth (at a time when
median income in the U.S. was actually lower than its lowest
level during the Carter years).

(iv) Associational juxtaposition. This principle is often
thought of as the core strategy common to all of advertising. It
consists of the juxtaposition of an image of the product with an
image of a person, object, or situation towards which the
intended audience can be assumed to have positive feelings. The
aim is to transfer the viewer's (presumably positive) response
from the background image to the image of the product. In other
words, the goal of the ad is to create an association in the
viewer's mind between the product and the image it is paired
with. Hence the term "associational juxtaposition." Aside from
its frequent use in magazines, billboards, and posters,
associational juxtaposition is also popular in the area of
political advertising, e.g., in the oft-used image of a candidate
standing in front of the flag or, somewhat more inventively, the
case of a recent (unsuccessful) candidate for the governorship of
New Jersey, who sought to associate himself with the Kennedy
years through the interpolation of several images of that period
in his campaign ads.

We can take it for granted that the ubiquity of
associational juxtaposition in advertising must be supported by a
substantial body of proprietary research. But there is also some
published research with a bearing on this question. As Stout

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(1984) has pointed out, the theoretical model on which
associational juxtaposition in advertising is typically based is
that of Pavlovian conditioning, according to which repeated
exposure to a pair of stimuli, one positively valued (the
unconditioned stimulus), the other neutral (the conditioned
stimulus), eventually leads to a "conditioned," i.e.,
artificially induced, positive response towards the initially
neutral stimulus. There is considerable evidence that this kind
of manipulation of response is effective for both human and
animal subjects, and, within this larger body of evidence, there
is also some research which specifically supports the notion that
Pavlovian conditioning can work with pictorial stimuli (most
notably, perhaps, a pair of studies in which subjects were turned
into boot fetishists through repeated exposure to sexual images
paired with pictures of boots; see Rachman, 1966; Rachman &
Hodgson, 1968). Furthermore, in the area of advertising,
evidence of the effectiveness of associational juxtaposition
comes from a study by Zuckerman (1990), who found that
high-school students' responses to certain products appeared to
have been conditioned by the imagery paired with those products
in magazine ads.

II. How Do We Measure Awareness of Visual Manipulation?

Having described a set of principles which I would expect a visually "literate" person to be familiar with, I want to go on now to a discussion of the problem of actually measuring this kind of "literacy" for research or educational purposes. My comments at this point are based on research in progress, which I hope to be able to present more fully on a future occasion.

The major difficulty which the researcher encounters in trying to measure visual literacy is, of course, the same basic obstacle which any research on viewers' responses must face: Since the thought processes that we are interested in are primarily or entirely related to vision, how do we "tap into" them without resorting to verbal interviews or written questionnaires? Few attempted solutions to this problem ever manage to circumvent words entirely, and those which do are typically tailored to very different aspects of visual response from the ones we are concerned with here. (Most completely nonverbal methods deal either with the elementary contituents of visual perception -- e.g., sequence and duration of visual fixations -- or the emotional end-results of visual response -- e.g., heart rate, GSR, etc. -- whereas we are concerned with visual thinking.) Even when we are forced to resort to words, however, we can at least try to make sure that our measure of visual "literacy" is not confounded with linguistic competence (e.g., the respondent's level of verbal fluency, or her/his knowledge of technical terms such as low-angle shot, montage,

etc.).   This has been a primary goal of the methods my students
and I have been developing in our attempt to assess viewers'
awareness of the kinds of visual manipulation discussed above.
Specifically, we have been working with four different techniques
for assessing this awareness.

Our most encompassing technique is one which has been
used extensively by researchers dealing with visual aesthetics,
especially in cross-cultural contexts.   Its basic feature is
classification: The respondent is given or shown a set of
images, and s/he is asked to perform some form of sorting task
with them, the assumption being that the sorting task may reveal
the respondent's awareness of features which some of the images
have in common, even if s/he is unable to give a verbal account
of those features.   At present, we are using one of the most
common versions of this technique to assess viewers' awareness of
implicit propositionality in advertising.   Respondents are
initially shown a pair of ads exhibiting two different implied
propositions (e.g., in one case a cause-effect relationship
between liquor and romance, in the other case an implied analogy
between a luxury automobile and a classical statue).   They are
then shown a third image which shares the propositional structure
of the first ad and the background imagery of the second (e.g.,
an ad implying a cause-effect relationship between wearing a
certain type of make-up and looking like a classical statue), and
they are asked to match the third ad with one of the first two,
whichever seems to be closest to the third in terms of

advertising strategy. Repeated over a number of trials with
different sets of ads, this technique can give us a sense -- we
hope -- of the relative salience of propositional structure as an
aspect of each individual viewer's response to advertising, and,
more importantly, this technique can also serve as the basis of a
comparison between viewers with different kinds and degrees of
prior visual experience.

This technique can also be used to assess viewers'
awareness of various aspects of visual composition, and our
previous work on this subject did indeed yield the finding that
people with practical experience in painting, drawing, and/or
photography were more likely to classify pictures on the basis of
formal elements (e.g., close-up vs. long shot, symmetrical vs.
asymmetrical design, sharp vs. soft focus, etc.), as opposed to
content (e.g., pictures of people, pictures of buildings, etc.).
However, in our recent research, we have attempted to assess not
only whether a viewer "sees" the composition consciously but also
-- very crucially, for our purposes -- whether s/he is aware of
the function of the composition as a means of affecting viewers'
reactions to the image. Focusing on the specific area of
"paraproxemics," we have been experimenting with various ways of
getting at viewers' conscious awareness of the more common
conventions in this area. The basic technique that we have
finally settled on involves the production of two different
versions of an episode from a movie or TV advertisement, a
"correct" version (done according to the standard conventions)

and a "wrong" version (in which the conventions are broken or reversed). For example, by re-editing selected images from an existing film, we might produce a pair of sequences in which either the hero ("correct" version) or the villain ("wrong" version) is favored by relatively tighter close-ups. The respondent is then asked to pick the version which is most likely to have occurred in a regular Hollywood movie. It goes without saying, of course, that this procedure must involve a delicate calibration of the amount of contextual information which the viewer is allowed to have concerning the movie, TV program, or ad in question. For example, in the specific case described above, the respondent should know who is supposed to be the hero and who the villain, but s/he should not be so familiar with the movie as to recognize actual visual sequences from it.

The third procedure that I want to mention here is much simpler than either of the above, but it also suffers from a flaw that the others do not have. We have been using this procedure in testing viewers' awareness of "false continuity" in editing. We begin by showing an easy-to-grasp example of the kind of editing we are interested in (the example is an ad, from Howard Baker's 1980 presidential campaign, in which a standing ovation has been shifted from one part of a speech to another). We then show the respondents a series of other visual sequences and ask them to pick the ones in which they can detect similar kinds of edits. The flaw in this method, of course, is that the respondent is already sensitized by our question to what it is

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we're after, so that all we can say we are testing is how acute
the respondent's perception of this device is, rather than
whether s/he would be aware of it in ordinary circumstances. We
would very much like to develop some less direct method of
getting at this aspect of visual literacy -- but, of course,
indirectness also has its price: As the reader may have noted,
the open-endedness of the sorting tasks mentioned earlier means
that we cannot be sure, simply because a viewer did not sort in
terms of formal structure, that s/he is completely unaware of it.

Our final procedure is an attempt to gauge the extent to
which viewers are aware of the uses of associational
juxtaposition in magazine advertising. Specifically, this
procedure tests subjects' ability to identify the types of
products that are likely to be associated with certain highly
conventional forms of advertising imagery. The procedure
involves showing the subjects a set of advertising images with
product labels and all other copy removed, and asking for an
estimate of what the most likely products might have been in each
case. We have experimented with both open-ended and fixed-choice
responses, although, for reasons to be discussed shortly, the
latter method seems preferable. An example of the images we have
been testing is a view of a mountain in the Rockies, with a lake
in the foreground, a forest in the middle distance, but no
people, roads, buildings, or other evidence of humanity anywhere
in sight. In earlier research, I had found that, when this kind
of scene, a pristine, "empty" landscape, usually in the

mountains, appears in a general-circulation magazine, it is very
frequently associated with cigarette advertising. It is in fact
one of the most common categories of associational imagery in
American magazines, rivalling even such encompassing themes as
wealth or sex (Messaris, 1989). Nevertheless, despite the
ubiquity of this kind of imagery and the obviousness of the
strategy behind it, only about a third of the subjects who were
tested with open-ended questions were able to connect the
mountain scene to cigarettes. (Most thought that it was a travel
or resort ad, although the most common conventions in that area
are actually quite different from this one.) However, subjects
tested with fixed-choice responses performed significantly
better, with more than half picking the correct response. This
suggests that open-ended testing is too conservative a test of
visual awareness in this case, since a viewer might readily
recognize associational juxtaposition when confronted with it
directly and yet retain no subsequent memory of the specific
strategy used.

Conclusion: Applications

Where do we go from here? Once we have measured visual
"literacy," in the sense in which that term has been defined
here, what do we do with the results? There are two,
complementary directions that seem to me well worth exploring.
On the one hand, it would be interesting to know considerably
more than we do now about the antecedents of visual "literacy"

among adult viewers. What prior experiences, and what aspects of
the visual media themselves, lead to greater awareness of
techniques of visual manipulation -- and what is the general
population's level of awareness to begin with? My own previous
research in this area suggests that awareness is strongly related
to education and that, for many commonly-used devices, it is
surprisingly low (Messaris, 1981; Messaris & Nielsen, 1989) --
but these results were based on verbal interviewing, and are
clearly in need of replication using the kinds of methods
described in this paper. The second research direction to which
the methods we have examined could be applied is also, in my
view, the ultimate goal which motivates this entire area of
research. That goal is to determine to what extent visual
"literacy" actually makes viewers more resistant to visual
manipulation and more critical of what they see (and hear and
read) in the visual media. As far as adult viewers are
concerned, these questions are virtually unexplored territory,
and it is my hope that the theoretical framework and the methods
presented here will make some contribution to their future
exploration.

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