

1992

Split- and multiple-images in filmic presentations: Concise information or multiple confusion?

Barbara J. Erickson
University of Northern Iowa

Let us know how access to this document benefits you

Copyright ©1992 Barbara J. Erickson

Follow this and additional works at: <https://scholarworks.uni.edu/grp>



Part of the [Education Commons](#)

Recommended Citation

Erickson, Barbara J., "Split- and multiple-images in filmic presentations: Concise information or multiple confusion?" (1992). *Graduate Research Papers*. 2338.

<https://scholarworks.uni.edu/grp/2338>

This Open Access Graduate Research Paper is brought to you for free and open access by the Student Work at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Split- and multiple-images in filmic presentations: Concise information or multiple confusion?

Abstract

Because there is more than one panel with moving pictures being viewed simultaneously, many questions can be posed about the audience's ability to process and interpret the multiple images, the construction of intended messages, and the appropriateness and ramifications of the use of this type of technique in moving visual mediums. The question central to this study will deal with analyzing the split/multiple moving image technique: How does the use and arrangement of multiple images or panels influence the viewer's interpretation of the message? Further, through a review of previous studies, an attempt also will be made to learn the following: how the viewer might "read" the codings which appear simultaneously; in what instances the technique adds to or detracts from the intended message; and whether the message would be clearer if presented using alternate techniques.

Split- and Multiple-Images in Filmic Presentations:
Concise Information or Multiple Confusion?

A Research Project
Submitted to the
Department of Curriculum and Instruction
In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
UNIVERSITY OF NORTHERN IOWA

by
Barbara J. Erickson

May 1992

This Research Paper by: Barbara J. Erickson

Entitled: Split- and Multiple-Images in Filmic
Presentations: Concise Information or
Multiple Confusion?

has been approved as meeting the research paper requirement
for the Degree of Master of Arts in Communications and
Training Technology.

R. Muffoletto

Director of Research Paper

April 24, 1992
Date Approved

Robert R. Hardman

Graduate Faculty Advisor

April 29, 1992
Date Approved

Robert R. Hardman

Graduate Faculty Reader

April 29, 1992
Date Approved

Peggy Ishler

Head, Department of
Curriculum and Instruction

April 30, 1992
Date Approved

TABLE OF CONTENTS

	Page
LIST OF FIGURES	ii
I INTRODUCTION	1
Area of Focus	4
Problem	6
Importance of Problem	7
Parameters	9
Terms	11
II REVIEW OF LITERATURE	15
The "Language" of Film	15
Film Semiotics	20
Film Techniques	21
Multiple Image Research	23
Visual Literacy	25
Multiple Moving Images	29
Panelized Action in <u>The Boston Strangler</u>	31
Montage in Multiple Images	37
Cultural Codings	38
Perceiving Multiple Moving Images	39
III CONCLUSION	42

LIST OF FIGURES

Figure	Page
1. Initial arrangement of the multiple-image panels in the montage of frightened women throughout Boston in the movie <u>The Boston Strangler</u> . . .	34
2. Subsequent arrangement of the multiple-image panels in the montage of frightened women throughout Boston in the movie <u>The Boston Strangler</u>	34

INTRODUCTION

For the individual, real life occurs in chronological order. Events may precede, coincide or follow those of other people, but each person lives a day-to-day, second-to-second linear existence with no re-takes. In film, the occurrence of events can be represented in a multitude of ways through selective sequencing of scenes and editing techniques. What may seem an illogical arrangement for presenting images on screen becomes logical when compared to the human thought process--memories of past occurrences, projections of the future, and current mental ideas.

That film does not mirror real life makes it no less acceptable as a perceived reality to viewers. In fact, the rearrangement and compression of time in film seems to be preferred by audiences. (Most often, who would have the time or desire to sit through a natural order of a story depicted in real time?) Gershon (1980) suggested that viewers, when they begin to watch a program, make an unconscious decision to believe that, to some extent, it is real (p. 46). This acceptance of film as reality most likely stems from the close approximation film has to reality (Monaco,

1977, p. 130). Ruby (1982) most logically stated, "We cannot capture reality on film, but we can construct a set of images consistent with our view of it" (p. 125). This view is the illusion the audience perceives. Nadaner (1984) explained that film viewers are overtaken by the illusion of reality through its dual powers of mimesis (photographic representation) and kinesis (movement over time), which combine to present a succession of images over time, and "the viewer becomes captivated in a virtual microcosm of reality" (p. 124).

Audience preferences have evolved concurrently with technological advances in film-making. As the art matured, so did the expectations of the audience. Each innovative film technology, if accepted by the audience, became a step forward, negating, for the most part, a step backward to earlier methods. This can be seen in the progression from Nickelodeons, to feature length silent films, to "talkies," to color films.

Almost simultaneous with the innovation of moving pictures came the desire to analyze the new medium. The mechanics were, and continue to be, fairly simple to explain. Methods of lighting, projection, and the

rapid sequencing of what are really still pictures are illustrated in most all film history textbooks and handbooks (Boggs, 1978; Madsen, 1973; Madsen, 1990; Monaco, 1977).

However, methods for analyzing audience reception and interpretation of motion pictures, as well as the analysis of the purposive constructive techniques of films, and hence the message brought forth, are not as clear cut. As will be discussed more fully later, an initial problem lay in agreeing on an acceptable mode for referencing film analysis. Some discord arose among critics as to whether a visual, moving medium could or should be analyzed through verbal means; how concepts of visual literacy would apply; and, whether the compositional elements of film constituted a "language" (Corcoran, 1981, p. 182, 188; Cowen, 1988, p. 99; Messaris, 1987, p. 1; Metz, 1974a, p. 92-93; Monaco, 1977, p. 121, 142; Ruby, 1982, p. 129).

After viewing a film, whether it be informational, instructional or for entertainment, audience reaction generally is related to the content or subject matter. Unless the viewer is involved in film-making, comments usually do not surface about cuts, fades, wipes,

dissolves or any of the numerous editing techniques. This is because audiences have been acclimated to the use of these techniques in film and do not consciously think about them. For example, cuts are the most widely used technique to change from one scene to another. The rationality for the naturalness of film cuts is that they are similar to human eye movement. In looking around a room, the human eye generally does not pan (make a lateral scan) of objects in that room, but rather the tendency is to focus on one object, then another, and another. However, it is not humanly possible in the blink of an eye to go from one locale to another or to a different place in time as it is in film. Techniques that are not natural to human eye movement or capabilities have become accepted by motion picture audiences with their repeated use over time. Few viewers question the perceived reality of changing scenes through other previously mentioned techniques, unless they are blatantly over-used within the same film.

Area of focus

As the industry of motion pictures matured, new technologies allowed film-makers to introduce new

visual techniques. One, which was introduced in the mid-1920s, but which was used relatively little again until the 1960s, is the split- and the multiple-image screen whereby two or more panels of moving, static or a combination of moving and static images are projected simultaneously. During the last three decades this technique has been used extensively for promoting products in trade shows and also for presentations in theme parks, such as Disney Land, Disney World and Epcot. In these instances, multiple moving images were generally projected on immense screens and/or geometric configurations (Allen & Cooney, 1963).

More recently, this multiple-image technique has seen a resurgence of use on smaller screen mediums such as with television advertisements, instructional television, sit-coms, music videos and sporting events. During the televised coverage of the 1992 Winter Olympics held in Albertville, France, side-by-side moving images of skiers with their digitized times superimposed on the screen were used for comparison value at strategic points along the course in the downhill racing. In a January 1992 episode of the television show Doogie Howser, the TV screen split

vertically to show Doogie and his girlfriend, Wanda, engaged in a long-distance telephone exchange; the right half of the screen then split horizontally to depict a subsequent conversation of Wanda and her girlfriend; and later, the screen split into quadrants of on-going action as four people participated in a conference call that became rather noisy as the audio for each quadrant was also interjected.

Perhaps the most prolific use of multiple, moving images in a motion picture was in a 1968 movie, The Boston Strangler. An estimated 35% of the movie was presented through multiple panels of action projected simultaneously on the same screen (Abbott, 1984, p. 154). This film was particularly innovative in that often the geometrical arrangement of the panels were asymmetrical. The extensive use of multiple images in this production met with mixed reviews. Nevertheless, the movie provides a good basis of study for the use of multiple moving images.

Problem

Because there is more than one panel with moving pictures being viewed simultaneously, many questions can be posed about the audience's ability to process

and interpret the multiple images, the construction of intended messages, and the appropriateness and ramifications of the use of this type of technique in moving visual mediums. The question central to this study will deal with analyzing the split/multiple moving image technique: How does the use and arrangement of multiple images or panels influence the viewer's interpretation of the message? Further, through a review of previous studies, an attempt also will be made to learn the following: how the viewer might "read" the codings which appear simultaneously; in what instances the technique adds to or detracts from the intended message; and whether the message would be clearer if presented using alternate techniques.

Importance of the problem

The medium of film has a strong influential impact on its viewers. Fads, fashions, mannerisms, and on a broader scale, beliefs, customs, and cultures are somewhat shaped or at least reinforced through the media. Regardless of the approach in understanding media, be it semiological, psychoanalytical, Marxist, sociological, or any host of philosophical origins, an

underlying assumption exists that media influences viewers (Berger, 1982).

Conscious decisions are made by the film-maker for every technique that is included in film. Split- and multiple images are but one technique, but one that is seeing an increased use in advertisements, television, sports, music videos, training films and commercial presentations. Technological advances have afforded a myriad of spinning, flipping, twirling, sliding, folding, moving images to appear simultaneously on one screen. Even in the more mundane split-screen film, an analysis of the viewer's processing and interpretation of the presented syntactical patterns of frames, shots, and sequences is essential for the film-maker. These patterns, or codes, are of social/cultural origins and the exploration of those origins provides paradigmatic meaning; contextualizing information within a social/cultural realm in which the viewer is familiar (Becker, 1986, p. 41; Becker, 1987, p. 5). In applying this notion to television, Cohen (1987) noted that the syntactical combinations of images are further compounded by the technical variables such as lighting, camera movements and style of editing which "are an

integral part of visual meaning, each with its own codes and conventions" (p. 6).

With multiple-images, independent messages are transmitted through each panel of moving picturization, and the interpretation or "reading" of the encodings in that single transmission is difficult enough given the complexity of the medium of film. Concurrently projected images add even another dimension of complexity in building on to the creation of meaning. As Berger (1982) noted, ". . . creative artists of all kinds (and in all media) need to be self-critical--in the positive sense of the term--so that they can understand how they generated the effects they were after, what worked and what didn't" (p. 157).

Parameters

This study will draw on previous research that touch on numerous areas, but all of which provide some basis for interpreting and analyzing the filmic technique of split- or multiple-screen. Included are (a) reference to linguistic models for interpretation of the medium of film; (b) studies on the use, interpretation, perception, analysis and conceptual frameworks for examining film techniques; and (c)

discussion on theories of visual literacy, as well as theories concerning the relational aspects of montage.

Multiple images viewed through the mediums of television and motion pictures that are not the result of viewer selection (such as in user controlled video inserts), are the primary focus of this study. Special screens that allow global, geometric, 180 or 360 degrees representations, and enormous projection areas may also portend to some aspects delineated in this study, but the common referent is to television, small screen and standard cinema--formats of single screen projection. Because of its innovative and extensive use of multiple images, examples will be drawn from the 1968 movie, The Boston Strangler. The audio element of multi-image presentations, although a very important component, will only be mentioned as it relates to visual concepts. (The audio element would entail a whole other study in itself.)

Extrapolations from the aforementioned studies will constitute the basis for a conjecture on the viewer's ability to decode and construe meaning from simultaneously projected multiple moving images. Implications of the use and effectiveness of the

multiple image technique will then be deduced from the surmised findings.

Terms

Words commonly referred to by scholars in many of these studies sometimes have a slight variance in their explication. For sake of clarity a review of the more frequently used terms follows.

Multiple-Image

Several related studies commence with the assumption that the reader understands the term "multiple-image." Others have included a brief explanation of what constitutes a multiple-image, and most of those definitions are relatively similar. Iam and Reeve (1971) described multiple images as "a form of filmic presentation in which the receivers see two or more images on the screen or screens" (p. 3).

Fradkin (1976) delineated multiple image presentations in his study to mean "the use of more than one image, with or without synchronization, on a single screen or multiple screens, with slides or any appropriate media mix to accomplish a predetermined learning task" (p.1).

More simple definitions were offered by Madsen (1973) who described the multiple-image effect as one

in "which several events are occurring simultaneously in separate panels within a single scene," (p. 188), and this interpretation which appeared in a January 1975 Training Journal article: "Multiple imaging means you're showing the viewer more than one image in real time" (p. 51). Perhaps the most clarifying explanation was extended by Goldstein (1975):

Although the terms multimedia, multi-image, multi-screen, and multimage are often used interchangeably, the term used here is multiple-image presentation, meaning, specifically, more than one image presented simultaneously, without regard to number or screens used, method of projection, or addition of sound. (p. 34)

This will be the accepted definition for this study, with the exception of the limitation to a singular screen.

Montage

This term seems to have a wider span of interpretation. Cohen (1988) simply related montage to mean "the connection of different film shots or segments," (p. 97) but then expounds on the term by relating filmmaker and film theorist Sergei

Eisenstein's theory of montage as "the collision of conflict between temporally and spatially unrelated or unmatched shots that could give rise to a new concept for the spectator" (p. 97). A more flowery definition was given by Boggs (1978) that "montage refers to an especially effective series of images and sounds which, without any clear logical or sequential pattern, form a kind of visual poem in miniature" (p. 97).

Providing a three-part definition of montage, Monaco (1977) referred to Eisenstein's idea, simple editing, and also a third notion of "'Dynamic Cutting': a highly stylized form of editing, often with the purpose of providing a lot of information in a short period" (p. 417). Another axiom is stated by Madsen (1973): "A montage, as defined in American film, is a series of relatively short scenes, which, when viewed as a whole, convey a single unified meaning" (p. 49).

Linearity

Allen and Cooney (1963) defined linear as "a form of filmic presentation in which images are presented separately on the screen, each image disappearing as the succeeding image appears," (p. 2) and non-linear, as "a form of filmic presentation in which images are

presented cumulatively and simultaneously on the screen" (p. 2).

REVIEW OF LITERATURE

Relatively little research has been generated on the use of split- or multiple-image screen in motion pictures, although in recent years more attention has been given to multiple use of static images. Therefore theories and examples from the fields of visual literacy, art and film study will be drawn upon to correlate the focus of this paper. To provide common ground for understanding the nomenclature used for film analysis, the "language" of film will first be explored, followed by sections on film techniques, multiple image research, visual literacy, multiple moving images, panelized action in The Boston Strangler, montage in multiple images, cultural codings and perceiving multiple images.

The "Language" of Film

Describing a parent's sensory pleasure derived from the smell of his/her freshly bathed newborn child through another sense, for example, touch, is akin to communicating one's perception of the medium of film using the verbal mode of words. It is very difficult to convey what has been internalized from one medium while using another. Scholars have struggled, and at

times disagreed, over what should serve as a common basis from which to relate the unique aspects of film. The argument centers on whether the processing of the codes of film, is learned or innate, and whether this process can, or should be, referred to as a "language."

In referring to television, (but in what would also be applicable to film since the techniques are very similar,) Cohen (1987) purported that the "grammar" of television is learned, and that mastery of the grammar of television is in knowing things such as when one shot dissolves into another, the two shots are somehow associated and when the screen fades to black, discontinuity in location, time, or subject matter is suggested. She delineated between linguistic grammar and television grammar in that the latter consists of more than one symbol system that must be simultaneously and holistically processed. Drawing on suppositions made in a 1981 publication by Gavriel Salomon, Cohen supported the notion that viewers need to know symbolic conventions in order to master the grammar of television and that these conventions probably cannot be expressed in rules. She stated, "Verbal syntax can be logically expressed in rules but the language of

film and television is guided more by what Saloman calls 'conventions of coherence'" (p. 4). In other words, the language of television is learned not through rules, but through experience gained in viewing the medium.

Corcoran (1981), Nadaner (1984), and Cowen (1988) also cited Saloman's research toward understanding film or television through media codifications, with Nadaner, although crediting Saloman's work as "the most probing work to date on the interaction of media and cognition," (p. 122) later criticizing that Saloman fails to reach a model of cognition of film because "he studies the corollary issues of whether film and television viewing can supplant the skills of active image formation that would be used in reading" (p. 122).

Nadaner further contended that the study of film and cognition has been hindered by the absence of dialogue between psychological researcher, film critics, and phenomenologists (p. 122). Moreover, he argued that researchers, in their approach to the problem of understanding visual perception:

have extended their experience with verbal language to create the metaphor of visual literacy. They have then sought out a visual alphabet, visual grammar, and visual syntax and conceptualized the cognitive response in relation to this essentially verbal metaphor. This approach is ultimately undermined by its verbal rather than visual basis, because it is incapable of capturing what is most distinctive about visual communication. (p. 122)

Many visual literacy studies, including those linked to film, incorporate an analogous acceptance of visual interpretation via the rules of verbal language: "The analogy with language that the metaphor implies is only misleading if it is narrowly interpreted. Certainly, suggestions that pictures have a syntax or a code tend to produce confusion at an analytical level" (Debes & Williams, 1984). . . . "Film is an art form, a literature . . ." (Stupp, 1975, p. 320). Orr (1984) uses "the analogy of the elements of cinema being a Language" (p. 5) to liken the camera angle to a non-evaluative adverb or adjective and the subject of the shot as the noun.

In a 1984 study on The Context of Media, O'Grady conceded that the link to terms such as the language, grammar and rhetoric may be misleading. However, he found that a similarity to linguistics existed in the formal structure of image-making codes. (p. 1).

Becker's (1986) endorsement of the study of filmic communication as a language is based on a different premise; that language is a social derivation and each medium has its own language and conventions (p. 41).

Monaco (1977) contended that film is not a language in the sense that English, French or mathematics is, and he backed this belief by noting it is impossible to be ungrammatical in film. Further, he noted that it is not necessary to learn a vocabulary to understand film. But he did concede that film is very much like a language, so it is useful to use the metaphor to describe film (p. 121). Messaris (1987), on the other hand, believed the correlation between film and language is overstated (p. 1) and he would most likely abhor statements like, "The cinematographic elements of each visual image work as a language and proper grammar must be used in order for the message to be conveyed in its most potent form" (Orr, 1984).

But why the emphasis on the so-called language of film in a study that is to deal with multiple images? This overview of the language of film has been included to enlighten the reader of the varying approaches the referenced scholars have used in their studies in addressing visual concepts, and to emphasize that the selection of words to convey meaning about visual impressions is a difficult task. Corcoran (1981) expressed this problem well: "Cinema and music share an important limitation in their capabilities: neither is a specialized language system capable of explicit theoretical discourse without making use of a verbal system" (p. 188).

Film Semiotics

Ruby (1982) questioned "whether it is possible to construct a science of signs that is not so heavily dependent up on linguistic models--a semiotic that deals with all sign systems without making the automatic assumption of the primacy of language," but concluded the answer, for now, remains unclear. Nevertheless, he felt since language is only one variety of a communication system, film should not be treated as a language, but rather a communication

system. As such, theories of film communication could then be explored in which films (sign-events) could "be organized to emphasize the syntactic (aesthetic), the semantic (informational), or the pragmatic (the call to action) elements" (p. 129).

In Language and Cinema, Metz (1974b) noted that syntagmatic relations unfurl simultaneously as well as in succession, and because film takes place both in time and in space, they remain syntagmatic since they unite to become an element present in film (p. 161). As example, he elaborated on montage "as a general process of ordering which may be relevant within a single 'shot' as well as between different shots [emphasis added] is the very foundation of the film as a signifying discourse" (pp. 161-162).

Film techniques

"In print, punctuation, word length, and paragraphing indicate the pacing of word structure. In video, the type of transition used between shots indicates temporal and spacial relationships between one shot and the next" (Gershon, 1980, p. 60). For example, Gershon likened the fade-in (the gradual appearance of a scene from black), and the fade-out

(the gradual disappearance of a scene to black) to a chapter or section in written material. The dissolve combines the fade-out of one scene with the fade-in of the next scene, and is most often used to imply a minor change of location or short lapse in time (Madsen, 1990, p. 153). The speed of the dissolve might also indicate the extent of spacial or temporal change.

Boggs (1978) noted that transitions using slow dissolves are generally used to make the viewer aware of major scene changes or elapsed time. He also described the use of flips (where the frame appears to flip over revealing a new scene), and wipes (where a new image is separated from the previous one by a clear horizontal, vertical, or diagonal line that "pushes" the first image off the screen), to indicate time-lapse or place changes that are more apparent to the viewer. However, Boggs related that modern filmmakers most often rely on the simple cut (p. 89).

The cut, as previously noted, is the most common transition method. It is but one of a vast number of techniques used in film in the editing process. Madsen (1990) noted that "the fundamental concerns of cinematic editing relate to continuity, cinematic time

and distance, tempo and suspense, flashback and flashforward, montage and visual simile and metaphor" (p. 264).

The use of the multiple-image "technique" (Albert, 1968),--also referred to as a "format" (Fradkin, 1976), or an "effect" (Madsen, 1990)--is a method which addresses these film editing concerns in every panel, hence with multiple panels, a more complex project is entailed. Cohen (1987), in relating to single panel films, noted there was "an abundance of perceptual and conceptual information that an audience must simultaneously process at different levels if it is to render the program meaningful" (p. 1). With the addition of one more panels, how does the audience process the multitude of information?

Multiple Image Research

A fair amount of research has been conducted on the effectiveness of multiple images, particularly in the last two decades. However, the majority of studies refer to static multiple images, often in the use of slides with a lap dissolve (one picture fading while the next gradually appears for a momentary overlay).

Nevertheless, these studies are useful as a foundation on which to examine multiple moving images.

Fradkin (1976) stated, "Although the concept of multiple images has existed from cavean civilization to the present, the perceptual and learning relationships of this complex format have not been researched until recently" (p. 1). Reaction to the use of multiple imagery has been somewhat mixed. Proponents laud the usefulness of presenting more information in less time without a reduction in audience recall (Burns, 1985, p.6). A report by the Association for Multi-Image found "Recent studies show significant gains when comparing multi-image programs to single image programs" and also found that multi-image was shown to be an "instructional equalizer" (Gordon, 1978, p. 13). Other advantages were noted by Perrin (1969) in a different study: "The theory of multiple image suggests that for making contrast and comparisons, and for learning relationships, simultaneous images reduce the task of memory and enable the viewer to make immediate comparisons. . . . For visual comparisons, it seems axiomatic that simultaneous images are more effective than sequentially present images" (p. 376).

Criticism of multi-imagery lies not so much in its use, but rather, in its abuse. Because the amount of information presented can be so much greater than with other communication media, Fradkin (1976) stressed that the processes of selection and organization become more crucial. (p. 376). In direct reference to multiple images in film, Abbott (1990) cautioned ". . . if it has no real value to the film other than as a flashy technique, then it can only hurt the film" (p. 158).

Iam (1971) expressed that research studies related to multiple image communication were "comparatively few and sketchy," (p. 5) and in agreement with Perrin (1969), he noted the studies were largely technical and descriptive. However, he found that related literature had expanded enormously. Not specifically mentioned by Iam, but within the same time period, strides were being made in the Visual Literacy Movement which had direct significance to the interpretation of film.

Visual literacy

Analyzing viewer interpretation of visual data has been researched extensively the last several decades. Variations exist in defining what visual literacy and visual thinking mean, but key words that recur in most

studies are "symbolic elements," "codes," "perception," "interpretation," "understanding," and "processing." These terms, read separately, give little insight to the overall concept of visual literacy. But taken collectively, a relationship exists that provides a better appreciation of the notion. This too, is the principle employed in "reading" visuals; how the different elements combine to create the whole image.

Rock and Palmer (1990) recounted the central tenet of Gestalt psychology--the whole is different from the sum of its parts--was launched in 1912 as a result of an investigation into a visual illusion called apparent motion (the perception of movement that results from viewing a rapid sequence of stationary images, as in the movies). "The perception of the whole (movement) was radically different from the perception of its components (static images)" (p. 84).

The parts-to-whole perception of film was elaborated by Nadaner (1984) in relating concepts from Arnheim's Visual Thinking:

Arnheim develops the concept of perception as an intelligent act, comprising such operations as active exploration, selection, grasping of

essentials, simplification, abstraction, analysis, synthesis, completion, and correction. The unit (for model-building purposes) of visual intelligence is the gestalt. The gestalt is the principle of organization that searches out reality and creates meaningful form, and itself becomes differentiated through the interaction. (p. 123)

Cohen (1987) declared that is impossible to see any image initially in parts. "The total picture is first seen and then analyzed. The dots, lines, shapes, directions, tones, colors, textures, dimensions, proportions, and movements of an image are rarely noted individually" (p. 12). To employ visual literacy in processing these codes, Cohen asserted that an individual needed to understand how symbolic elements or codes are combined to produce meaningful units. She likened the symbolic convention to the "grammar" of television, noting that the grammar must be learned. But she noted that this learning takes place at a very early age. "Relevant to the idea of television literacy, the TV generation watched TV before it could read" (p. 15). Madsen (1974) had a similar view

regarding film literacy; it is learned at such an early age that it is acquired without conscious effort, much in the same way we learn to speak. Analogically speaking, he noted, "Babies ingest television programs with their mothers' milk" (p. 3).

Another approach to film literacy centers on the notion that viewers have some general cognitive skills applicable to the medium before they first encounter it. Messaris (1987) backed this argument with the example that "the use of the camera angle derives its meaning by analogy with real-life situations of looking up at a powerful person, or looking down at a weak person. . . . If this assumption is correct, a viewer should be able to respond without any necessary previous exposure to the use of camera angle" (p. 4).

In offering a semiotic tie to the structuralism of Levi-Strauss, Corcoran (1981) related the basic premise of structuralism "is that people have an innate, genetically determined mechanism that acts as a structuring force to limit the patterns of all human social behavior into codes that have the fundamental characteristics of language" (p. 183). This would support the conclusions Monaco (1977) drew from a test

conducted in 1920 (as well as similar subsequent studies) where rural African natives, who had little exposure to Western culture, were exposed to the medium of film. He deduced that: (a) every normal human being can perceive and identify a visual image, and (b) even the simplest visual images are interpreted differently in different cultures, adding, "So we know that images must be "read" [emphasis added] (p. 121).

Returning to Corcoran's (1981) exposition, a supposition was drawn that the production and perception of meaning for every for symbolic system, such as cinema, is "determined by all the internal relationships that prevail among its component parts. Cinema, in such a view, is a sequential system of encoded signs governed by rules of combination" (p. 183). How, then, are systems of signs projected simultaneously decoded by the viewer?

Multiple Moving Images

Gershon (1980) in addressing the visual literacy of television viewers, noted that "montage overwhelms the viewer within the world of the program, showing the need for attention to an enormous number of items in an obviously inadequate period of time" (p. 60). He was

referring to a sequentially presented format (which will be referred to as the conventional method of film). With split-screen or additional panel(s) of moving images the viewer is presented with even more information.

For the viewer, processing the added information depends on what and how it is presented. In recapping prior articles on multiple-image presentations, Iam and Reeve (1971) recounted that "the multiple-image technique applied the principle of contiguity, which means if two items are to be associated, they should be presented to the audience close in space and time." They further indicated that simultaneous images can permit a better structure design (p. 1). For example, Perrin (1969), (in addressing the topic of information density) explained that "the theory of multiple image suggests for making contrasts and comparisons, and for learning relationships, simultaneous images reduce the task of memory (a dimension of visual task) and enable the viewer to make immediate comparisons" (p. 376).

Gordon (1978) was more cautious in expounding views on the use of multiple imagery. He indicated that the interaction pattern of seeing several images

in the same visual field produced a unique visual language problem. "Depending on the placement of the images, the viewer may gain additional insights, become totally confused, or simply become bored by an overdose of visual redundancy" (p. 13).

Panelized Action in The Boston Strangler

As noted earlier, the 1968 movie, The Boston Strangler, made extensive use of the multiple image technique, with as many as 12 images appearing on the screen simultaneously (Abbott, 1984, p. 158). The film is the true story of Albert DeSalvo, who murdered 13 women in the Boston vicinity in the early 1960s. Because the public was so familiar with the story of the murders, it was thought that conventional film techniques would not maintain suspense. Therefore, the director, Richard Fleischer, decided to present the drama in a unique fashion using intricate multiple images to embed the element of surprise. Quoting Fleischer on the use of multiple imagery, Abbott (1990) wrote: "You don't have to cut back and forth in a conventional manner from one action to another. . . . It takes the place of the conventional montage to

quickly establish a trend of similar action occurring simultaneously" (p. 155).

Multiple images, in a panelized fashion, are used throughout this film. At times, the panels are the same size and orderly; at other times the size of the panels differ, as do their placement on the screen. This is especially apparent in a montage of unrelated, fearful women throughout the Boston area. This particular sequence begins with a full screen image of a woman carrying groceries in a park in early evening; her encountering a male passerby; her hesitation and glance over her shoulder after the man walks by. The screen then splits into five vertical panels separated by black borders that serves as a framed overlay depicting the same scene of the woman still standing and watching as the man continues to exit the picture (see figure 1).

Panel two, then panel four and five switch to images of different women walking in different locations throughout Boston. The first and third panels still show portions of the park scene, but then, they too, cut to shots of women out and about on the streets of Boston. The third panel then diffuses to a

high angle shot where initially only a woman's shadow is cast on a dark, wet street before her figure enters the picture. Abruptly, panels one through four go to black, and panel five becomes a woman unlocking her apartment door while looking directly into the camera. Then panel four shows a different woman going into her home, quickly locking the door behind her. Panels three, two and one appear, each depicting other women pulling down window shades and taking other measures of precaution. The screen then rapidly changes to another configuration of panels (see figure 2).

Depicted in these panels are various close-up and medium shots of a) a woman putting a gun in purse, b) a hand picking up a kitchen knife, c) a portion of a woman's face peeking out of the opened crack of a chain-locked door, d) a weapon being placed under a mattress, e) the opening of a drawer, and f) a dog. All these panels are of moving images, and all appear and stay on the screen at different frequencies. But most notably, this portion of the sequence, beginning with the full-screen image of the woman walking in the park, lasts less than 20 seconds. The sequence continues for another full minute with more rapidly

Figure 1. Initial arrangement of the multiple image panels in the montage of frightened women throughout Boston in the movie The Boston Strangler.

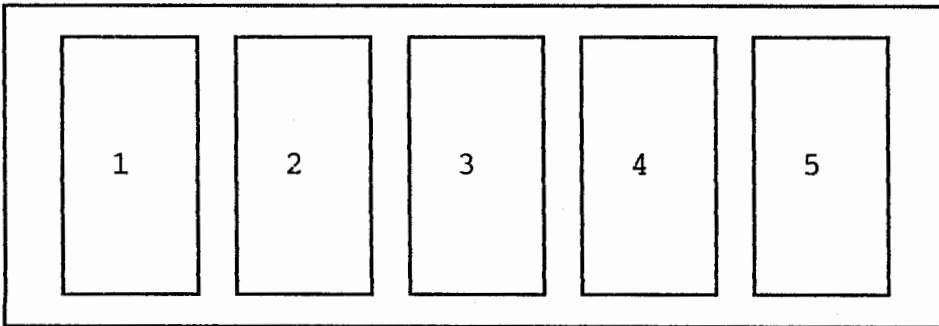
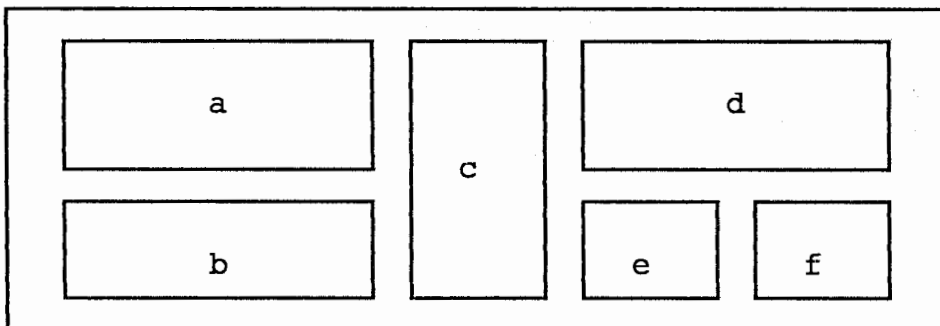


Figure 2. Subsequent arrangement of the multiple image panels in the montage of frightened women throughout Boston in the movie The Boston Strangler.



presented images and changing configurations of panels.

Throughout this film, the panels are presented in varying ways. Sometimes the multiple images are buttressed; other times black borders of varying sizes surround the panels--in effect, blocks of simultaneous moving images within rectangular or square panels that are momentarily matted on a black background. Most often the panels appear instantaneously and the images come and go in no particular pattern, with some images held longer than others for impact. In some instances, the size of the panels are quickly enlarged or shrunk for emphasis. Subjective and objective views of the action are simultaneously presented, as in a scene when the Boston Strangler is parallel parking his car. The viewer sees this action from the driver's point of view in one panel, and from an objective long shot of the overall scene in another. More often the subjective/objective combination was used to induce suspense--the subjective view of the strangler making his approach, concurrent with the objective view of the unsuspecting victim who was usually involved in routine activities behind locked doors.

Although this film was not lauded as a box office smash, it is cited for its innovative use of technology in several books on the special effects used in film (Abbott, 1990; Culhane, 1981). However, some Hollywood critics were less receptive to the film; one implying the over-use of multiple images was a bombardment to the senses (Reed, 1971, p. 203), and another that the study of the maniacal crime was shallow, but at the same time commending the suspenseful device of the multiple-image technique: ". . . to have one dim portion of the screen show something only hazily seen, but still goose-pimplly, while on the other portion there are people who will soon open that door and find the unspeakable, suggests intriguing possibilities for Hitchcockian films of the future" (Albert, p. 55).

In defense of criticism that viewers would not be able to absorb several images simultaneously as projected in The Boston Strangler, the film's director commented that "the mind and eye have been proven to be capable of tremendous speed and versatility in accepting multiple impressions . . ." (Abbott, p. 158). This notion is supported in the article "One Screen, Many Images" which stated "The human visual apparatus

and the human mind have an amazing capacity to sort out the essential meaning from seemingly disconnected stimuli" (p. 51-52).

Montage in Multiple Images

Montage is a crucial variable in story comprehension. Cowen (1988) pointed out that spectators can accept a montage that keeps narrative continuity which may bridge gaps of visual discontinuity in film such as with spacial and temporal breaks (p. 98). This is the glue in The Boston Strangler that holds the myriad of panelized images together. But even without the accompanying dialogue, insight to the relationship of images selected could be surmised by the viewer. The images were intentionally positioned and timed by the filmmaker in such a way to project a particular meaning.

The juxtaposition of images greatly influences interpretation. The classical illustration of the power of montage is an experiment derived by the Russian filmmaker Lev Kuleshov whereby expressionless actors were filmed juxtaposed with various other scenes. The editing led viewers to perceive subtle changes in expression, when in fact there was none

(Gershon, 1980, p. 58; Messaris, 1987, p. 9). Becker (1987) suggested that juxtaposition of images invited both symbolic and syntactic interpretation, and delineated paradigmatic meaning as that which is supplied by syntax patterns. The importance here, according to Becker, is that readers (viewers) can only work with the syntax patterns or codes that they know, and the codes they know come from their experience within their culture (p. 5).

Cultural Codings

On the other hand, DeGraff (1985) contended (in referring to television) that "presentational forms are generated to provide codings that perpetuate social and cultural relationships (p. 13). So it would seem that codes are not only used to interpret the medium, but the medium is used to generate new codes for a given society. This idea would support Worth's (1981) notion that film communication is a social process that employs the technology to transmit the humanly created message: ". . . a piece of film, in and of itself, is meaningless--that meaning exists only in a special social and cognitive relationship between filmmaker and a viewer." Worth also contended that once a filmmaker

releases a film it is a social act in a symbolic form which is available for participation in a communication process (p. 119).

Perceiving Multiple Moving Images

In sequential montage the meaning of each new image is determined by the context of what has gone before, whereas simultaneous images interact upon each other at the same time (Perrin, 1969, p. 369). Interpretation of simultaneous images is also swayed by what has preceded. Perception is so influenced by the relational aspect of images that even a simple realignment of images will construe new interpretation. Stupp (1975) noted "it is possible to change the ideological meaning of a film by the slightest alteration in the order of its shots. He also claimed that the psychological impact of a specific sequence could be altered by a minute prolongation or contraction of the duration of the event it depicts (p. 321).

In a 1975 study on the perception of multiple images, Goldstein questioned whether numerous inputs could be processed simultaneously. He found the viewer could be:

concerned with small fixation points within a picture, the meaning of the picture as a whole, or the meaning of the picture as it relates to other pictures that are presented either simultaneously or sequentially. Thus, if the observer is primarily interested in the general meaning of a series of pictures, small details within the pictures will not be important, fewer fixations will be required per picture, and the rate of scanning can be slower. (p. 55)

Goldstein also concluded that for the observer to absorb even a fraction of the information presented in multiple images, it must be done in a "very unsponge-like way" (p. 59). Giannetti (1976) stated that "the human eye automatically attempts to harmonize the major formal elements of a composition into a unified whole" (p. 60). This revelation, coupled with Goldstein's findings, would seem to back Fradkin's (1976) opinion that the multiple image communication vehicle be interpreted as a whole and not the sum of several channel components (p. 60).

Similarly, in addressing the difficulties of film analysis, Boggs (1978) pointed out the continuous

flowing form of film "cannot be frozen in time and space for analysis. Once frozen, it is no longer a motion picture, for the unique property of the medium is gone" (p. 6). This would suggest that Saussure's classical structuralist methodology¹ of breaking concepts down into minimal units for interpretation, as one would for linguistic analysis, would not be appropriate for film. Moreover, Metz (1974a) claimed that "the cinema has no distinctive units. . . . Even the most partial and fragmentary 'shot' (what film people call the close-up) still presents a complete segment of reality" (p. 115).

Perhaps Perrin (1969) concluded the analysis of simultaneous images on film best: "Multiple pictures make audiences understand more through feeling than through thinking" (p. 378).

¹Farrel Corcoran describes de Saussure's methodology as: Procedures of segmentation break utterances down into minimal units and identify their distinctive features, by reference to which any linguistic unit would be differentiated from any other.

CONCLUSION

Several assumptions regarding the use of multiple-images in film can be drawn from this study, as well as several questions. How to discuss the concepts of film is one concern. General consensus points to accepting the analogy of the "language" of film, borrowing terms from linguistics. However, the more in-depth studies that delve into a method of assimilating meaning to visualization of film are less concerned with the "verb," "adverb," "adjective," "noun-sense," turning instead their focus to richer assimilation of meaning through "signs," "codes" and "syntax."

The area of film literacy also meets with some disagreement among scholars as to whether it is self-learned or innate, or whether it need to be taught. Regardless, given the honing of technological capabilities, the increasing leniency of censorship, and the ever expanding creative use of the medium, additional instruction beginning at the preschool level would serve to embellish visual knowledge and impart discerning viewership of the culturally encoded medium. Horton (1982) and Sless (1984) concurred that although we live a visually oriented society, our schools

neglect the visual skills, emphasizing the verbal approach to learning.

Another split in views stems from how to analyze the use of multiple-images. On the one hand, some researchers contend this type of presentation needs to be experienced as a whole; on the other, analysis of the various components is the accepted approach. But even the studies that support the "experience as a whole" approach delineate the separate components to illustrate their points, negating the purity of their argument.

In considering the film a text, and its textual components to include frames, shots, and sequences (in which are embedded numerous codes through lighting, camera angle, arrangement, pacing, etc.), the concurrent addition of split- or multiple-images merely changes the number of cues, but still remains one text. Fradkin (1976) questioned, "In using several pictorial elements, how many "items" do they represent?" (p. 59).

If images are projected on the same screen, but separated into quadrants, panels, or the like, it would seem the information contained on the screen would still be considered one field of information. Why?

Because they were purposely arranged that way by the communicator (filmmaker) with the intention of being addressed relationally. This is particularly evident in the montage of women sequence previously mentioned from the movie The Boston Strangler. Each panel relies on the other panels of information, sometimes presented simultaneously, and other times staggered, to construe meaning. In this particular sequence, high camera angles and dramatic lighting were often used, to encode a feeling of insecurity and fear. Had this sequence been shot conventionally, it would have lost the immediacy of the situation--that women all over Boston were, at that same moment, taking precautions to thwart off attack by the strangler. In this light, the use of multiple images would appear advantageous.

On the flip side, whenever attention is brought to contrivances in film, a break in perceived reality occurs. As Boggs (1978) noted:

Although the visual element is the motion picture's primary and most powerful level of communication, the cinematography can often completely dominate a film taking it over by sheer force. When this occurs, the artistic structure

of the film is weakened, its dramatic power fades, and watching the film becomes simply an orgy of the eyeballs. (p. 69)

This became the case with viewing the Boston Strangler. The viewer at some point becomes aware of images being manipulated, and tunes into the fractioning, re-structuring, placement, appearance and disappearance of panels of moving images. Attention is then drawn away from reality and captured by technicality. Gershon (1980) noted it was "crucial that edits do not call attention to themselves and thereby disturb the viewer's acceptance of the sequence" (p. 58). Few dramatic films incorporate extensive use of multiple images for this reason.

Non-dramatic use of the split- and multiple-screen technique have been better received. The obvious intrusion of more than one image is more acceptable because the intention is not to mirror reality, but rather to inform, educate or entertain. Many music videos currently use multiple panels in their presentation. This would exemplify Perrin's (1969) comment of understanding multiple pictures more through feeling than through thinking (p. 378), as

often the relational connection of the images in music videos is loosely defined.

Instructional uses of split-screen are of a wide variety. Examples include an exercise to stimulate recall (Gustofson, 1969), and the evaluation of interaction (Moritz & Martin-Reynolds, 1980). With the Gustofson study, a split-screen videotape was played back to stimulate the subject's recall of what he had felt while watching the original film. One portion of the screen displayed the original motion picture; the other side showed the videotaped replay of the viewer's reactions while watching the original. Moritz and Martin-Reynolds related the use of split-screen videotape with the teacher on one half of the screen and the students on the other half to provide the teacher with multi-dimensional feedback for self-analysis.

The uses for split- and multiple-screen applications in film are many, but the intelligibility of this type of technique depends of the cultural coding and the simultaneous arrangement of these codes. The relational, or association aspect, and timing of

concurrently projected images become strong determinants of the conveyed message.

Research indicates that presenting information in less time does not reduce recall (Burns, 1985, p. 6), and that viewers can assimilate and derive meaning from the vast amount of information that is simultaneously project with multiple images. But do viewers prefer to receive information this way?

References

- Abbott, L. B. (1984). Special effects: Wire, tape and rubber band style. Hollywood, CA: The ASC Press.
- Albert, H. (1968, October). Blurring the line. Saturday Review, p. 55.
- Allen, W. H., & Cooney, S.M. (1963). The non-linearity variable in filmic presentation (Title VII Project No. 422). Los Angeles, CA: U.S. Department of Health, Education, and Welfare.
- Becker, A. D. (1986). A teaching model for the grammar of television. Journal of Visual/Verbal Languaging, 6(1), 41-47.
- Becker, A. D. (1987, February). Reader theories and educational media analysis. Paper presented at the Annual Convention of the Association for Educational Communications and Technology, Atlanta, GA.
- Berger, A. A. (1982). Media analysis techniques. Newbury Park, CA: Sage Publications.
- Boggs, J. M. (1978). The art of watching films: A guide to film analysis. Menlo Park, CA: The Benjamin/Cummings Publishing Co.

- Burns, R. A. (1985, May). Information impact and factors affecting recall. Paper presented at the Annual National Conference on Teaching Excellence and Conference of Administrators, Austin, TX.
- Cohen, J. R. (1987, May). The television generation, television literacy, and television trends. Paper presented at the Annual Meeting of the Eastern Communication Association, Syracuse, NY.
- Corcoran, F. (1981). Towards a semiotic of screen media: Problems in the use of linguistic models. Western Journal of Speech Communication, 45(2), 182-193.
- Cowen, P. S. (1988). Manipulating montage: Effects on film comprehension, recall, person perception, and aesthetic responses. Empirical Studies of the Arts, 6(2), 97-115.
- Culhane, J. (1981). Special effects in the movies: How they do it. New York: Ballantine Books.
- DeGraff, J. (1985, January). The relationship of film theory to instructional television. Paper presented at the Annual Convention of the Association for Educational Communications and Technology, Anaheim, CA.

- Fradkin, B. (1976). A review of multiple image presentation research (Contract No. NIE-C-74-0027) CA: Stanford University, for the National Institute of Education (DHEW). (ERIC Document Reproductive Service No. ED 130 680)
- Gershon, R. (1980, October). Know how visually literate your viewers are. E&ITV.
- Giannetti, L. D. (1976). Understanding movies. Englewood Cliffs, NJ: Prentice-Hall.
- Goldstein, E. B. (1975). The perception of multiple images. AV Communication Review, 23(1), 34-63.
- Gordon, R. L. (1978). The art of multi-image. Washington, DC: Publications Department, Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 167 115)
- Gustafson, K. L. (1969). Simulation of anxiety situations and its resultant effect on anxiety and classroom interaction of student teachers (Grant No. OEG-5-9-325039-0021-010). Washington, DC: Office of Education.

- Hortin, J. A. (1982). Introspection and visual thinking for the instructional technologist. Educational Technology, 22(6), 23-24.
- Iam, P., & Reeve, R. H. (1971, March). The image-accumulation technique as a variable in multiple-image communication. Paper presented at the Annual Meeting of the Association for Education Communications and Technology, Philadelphia, PA.
- Madsen, R. P. (1973). The impact of film: How ideas are communicated through cinema and television. New York: Macmillan Publishing.
- Madsen, R.P. (1990). Working cinema: Learning from the masters. Belmont, CA: Wadsworth Publishing.
- Messaris, P. (1987, November). The role of visual 'literacy' in film communication. Paper presented at the Annual Meeting of the Speech Communication Association, Boston, MA.
- Metz, C. (1974a). Film language: A semiotics of the cinema (M. Taylor, Trans.). New York: Oxford University Press.
- Metz, C. (1974b). Language and Cinema. Paris: Mouton & Co., The Hague.

- Monaco, J. (1977). How to read a film: The art, technology, language, history and theory of film and media. New York: Oxford University Press.
- Moritz, W., & Martin-Reynolds, J. (1980). Split-screen videotaping: The genie in the bottle. Educational Leadership, 37(5), 396-399.
- Nadaner, D. (1984). Film and cognition: A critical review of current theory. Studies in Art Education, 29(2), 121-129.
- O'Grady, G. (1984, November). The context of media study. Paper presented at the Annual Meeting of the National Council of Teachers of English, Detroit, MI.
- One screen many images. (1975). Training, 12(1), 33-35, 51-52.
- Orr, Q. (1984, August). The effect of selected cinemagraphic elements on audience perception of mediated concepts. Paper presented at the Annual Meeting of the Association for Education in Journalism and Mass Communication, Gainesville, FL.
- Perrin, D. G. (1969). A theory of multiple-image communication. AV Communication Review, 17(4), 368-382.

- Reed, R. (1971). Big screen, little screen.
New York: Macmillan.
- Rock, I., & Palmer, S. (1990). The legacy of Gestalt psychology. Scientific American, 263(6), 84-90.
- Ruby, J. (1982). A crack in the mirror. Philadelphia, PA: University of Pennsylvania Press.
- Sless, D. (1984). Visual literacy: A failed opportunity. Educational Communication and Technology Journal, 32(4), 224-228.
- Stupp, V. O. (1975). Analysis of a film. Reprint from "Communicating through literature." (ERIC Document Reproduction Service No. ED 120 849)
- Worth, S., & Gross, L. (Eds.). (1981). Studying visual communication. Philadelphia, PA: University of Pennsylvania Press.