

CINEMATOGRAPHY
The Visuals and the Story

BY
BRUCE A. BLOCK
Author, **THE VISUAL STORY**
UNIVERSITY OF SOUTHERN CALIFORNIA

SIGGRAPH FALL 2011

ABSTRACT

A writer is concerned with story structure. A musician is concerned with musical structure. A picture maker must be concerned with visual structure. If you create pictures for video games, feature films, animation, television shows, advertisements, or Imax movies, there is only one language available to you. The language is called “visual structure”.

Anyone creating visuals always confronts the same basic questions: How can you create, control and sequence your visuals so they tell a story? How can you link the visuals to the story so they support each other? How can you make your visuals unique and use them to communicate with the audience?

The answer to all of these questions is based on understanding the key building blocks to all types of visual structure. These visual building blocks are: space, line, shape, color, tone, movement, and rhythm. It is through the control of these basic visual building blocks that every picture maker stirs an audience's emotions, creates unique visual styles and controls the critical relationship between story and visual structure.

A definition of these visual building blocks can be found in any design class but the more important concept is how to use visual structure in relation to a story narrative. How do the two separate worlds of visuals and story fit together? If they remain separate, you end up with pictures that can work against the story, overwhelm the story or distract your audience from the story. When the visual structure and story structure are linked together, their final product can transform a production into a unique, entertaining and emotional experience for the audience.

This class is an overview about connecting visual structure and story structure together; not just in a theoretical way but also in a practical way that works in the direct production of both live action and animated projects. The principles discussed can be applied to productions of any length from commercials, to feature films, to open-ended Internet game environments. In any media platform, visual problems can be solved by understanding visual structure and its critical relationship to story structure.

ABOUT BRUCE A. BLOCK

www.bruceblock.com
babgroup@earthlink.net

Mr. Block has over thirty years experience in the technical, visual and production aspects of live action cinema, television, CGI and traditional animation. His career encompasses every type of film/digital production including feature films, television, live-action, animation, video games, commercials, documentaries, visual effects, and Imax films.

Mr. Block is the author of The Visual Story published by Focal Press. His book, available in several languages, is used professionally and educationally all over the world as the classic contemporary text on visual structure.

His recent producer and visual consultant credits include: *How Do You Know*, *The Holiday*, *Something's Gotta Give*, *Stuart Little*, *As Good As It Gets*, *Spanglish*, *America's Sweethearts*, *What Women Want* and *The Parent Trap*.

Mr. Block has been a professor for over thirty years at the USC School of Cinematic Arts where he teaches required master classes in visual structure. He also conducts seminars in North America and Europe for universities, advertising agencies, animation studios, game design companies, and national film boards.

CINEMATOGRAPHY

The Visuals and the Story

Picture making of any kind is based on controlling seven basic visual components: SPACE, LINE, SHAPE, TONE, COLOR, MOVEMENT and RHYTHM. Any basic design course can define these seven components but here they can be directly related to visual and story structure.

SPACE

The real world is three-dimensional, having height, width, and depth. But, the physical nature of a screen is two-dimensional. Movie, television and computer screens are flat surfaces that can be measured in height and width but practically speaking, have no depth.

The challenge is to portray our three-dimensional world on a two-dimensional screen surface and have the result appear believably three-dimensional. A viewer should be able to watch the screen's two-dimensional pictures and accept the images as a realistic representation of our three-dimensional world. There are two basic types of space.

Deep Space is the illusion of a three-dimensional world on a two-dimensional screen surface. It's possible to give an audience the visual experience of seeing a three-dimensional space (height, width and depth), even though all of the depth is illusory. There is never real depth because the screen upon which the picture exists is only two-dimensional. Stereoscopic 3-D may be coming to a screen near you but Stereoscopic 3-D relies on the same deep space illusions usually reserved for creating depth on a 2-D surface.

Flat space is the opposite of deep space. Deep space gives the illusion of a three-dimensional picture on a two-dimensional screen surface but flat space is not an illusion. Flat space emphasizes the two-dimensional quality of the screen surface. This creates a completely different kind of visual space.

LINE & SHAPE

Lines are everywhere in the real world. For example, doorways have two vertical lines and a volleyball has a circular line. The real world is also full of shapes. A door is a rectangle and volleyball is a sphere. Lines and shapes are closely linked because they define each other.

Line differs from the other visual components, because lines only appear due to tonal contrast. Depending on the contrast, a line can be revealed or obscured. To make recognizing lines easier, they can be divided into seven perceptual types.

Just as there are basic types of spaces and lines, there are basic shapes. The basic shapes are the circle, square and the equilateral triangle. Shapes exist in visual spaces that can be flat or deep.

TONE

Tone refers to the brightness of objects. Controlling the brightness of objects is critical when creating pictures in black & white or color. Working in color can distract a picture maker from the important visual control that tone has on a picture. The tonal range of a picture helps direct the audience's attention to a specific part of the frame and also affects mood and emotional feeling.

COLOR

Color, without a doubt, is the most misunderstood visual component. The additive and subtractive color systems are often mistakenly combined into a single incorrect system. Most people believe that the primary colors are red, green, yellow or blue. Many elementary school teachers believe that red, green, blue and yellow “look” primary, so magenta and cyan (which are primary subtractive colors) aren't introduced.

Color psychology and story telling/structural use is based on the subtractive color wheel, which includes the mixing of paint, pigments and dyes.

MOVEMENT

Movement is based on three areas: object movement, camera movement and the movement of the audience's point-of-attention as they watch a screen.

RHYTHM

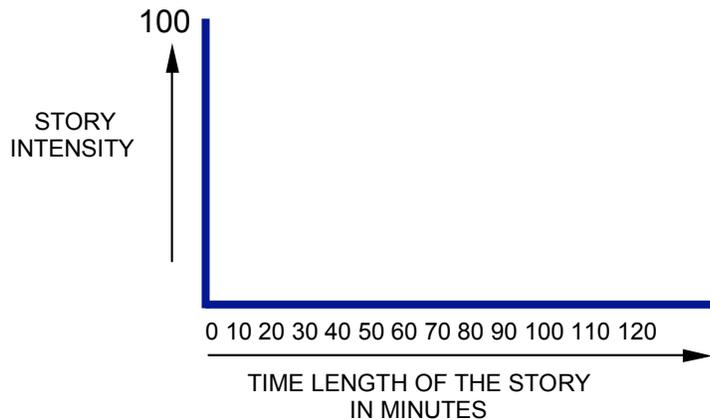
Rhythm is easy to experience, but difficult to describe. Rhythm is perceived in three different ways: we hear it, we see it and we feel it. Every rhythm is made up of three sub-components: alternation, repetition and tempo.

All of the basic visual components can be related to story structure so that a visual structure for these components can be created and used to help tell the story, create a unique visual style and engage the audience emotionally.

VISUAL STRUCTURE

In order to understand visual structure you must understand story structure. A story usually exists as words written on a page. The term ‘story’ refers to any length or type of story...from a simple appearance of a logo, a brief commercial, a short film, escalating levels of a video game, navigation through an Internet site, a sitcom, a feature length dramatic film or an Imax travelogue. The printed page is fine if you're reading the story but a different format is needed to visualize a story's structure. The structure of any story can be charted on a graph.

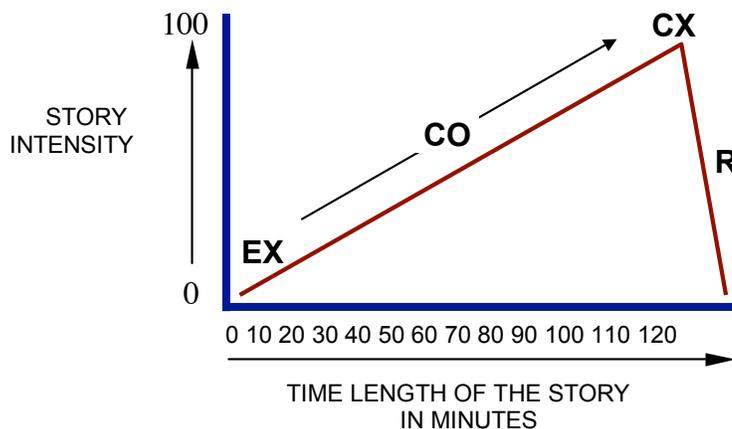
GRAPH A



This is a story structure graph. The horizontal axis of Graph A indicates the time length of the story (120 minutes in this example). The vertical axis represents the intensity of the story. ‘Story Intensity’ refers to the degree of conflict in the story. The “0” on the story intensity scale indicates a lack of intensity and “100” indicates maximum intensity.

Every story, no matter how brief or extended, has an exposition, conflict, climax and resolution.

GRAPH B



A line drawn on the graph represents the story's intensity. In Graph B, the story begins with the exposition (EX) where the story intensity is low or at "0" on the story intensity scale. The intensity begins to build as the story moves into the conflict (CO). The intensity of the conflict continues to increase until the climax (CX), which is the most intense part of the story conflict. In the resolution (R), the story intensity diminishes and the story ends.

A story begins with exposition; a conflict builds in intensity to a climax and then resolves into an ending. The terms used to describe the three basic parts of a story's structure also apply to visual structure.

VISUAL EXPOSITION

Just as there's story exposition, there's also visual exposition. The story exposition defines the characters, the story situation, the location, the time period, etc. The visual exposition, defines how the basic visual components will be defined and used to support the story.

A story begins: "Once upon a time there was a happy family". This exposition could be expanded to: "Once upon a time there was a happy family who lived in a specific type of visual space with specific types of lines, shapes, colors, tonalities, movements and visual rhythms." Now there is a story exposition and a visual exposition. Rules for visualizing the story have been created. The picture maker has used the visual exposition to provide a visual definition for the subject and the story.

The story and visual exposition are, ideally, revealed at the same time. In Steven Spielberg's *Jaws*, the music, visual and story exposition occur simultaneously. The audience hears ominous bass chords (the shark's theme song), a slow moving underwater camera looks for victims (the shark's visual point-of-view) and the shark devours an innocent swimmer (the story is about a killer shark). Spielberg sets up his musical, visual and story exposition in the opening sequence of his film. The audience learns the rules for the music, the camera and the story in this exposition. The audience has received all the facts they need to begin their adventure.

In *Jaws*, the music, visual and story rules created in the exposition never change. The theme music accompanies the shark's appearance, the shark's underwater view is always photographed in the same way, and the shark continues to attack. The audience so completely associates the music and camera angle with the shark that actually showing the shark becomes unnecessary. The expositional theme music and camera angle automatically trigger an emotional response (fear) in the audience.

The visual exposition can set up the visual structure for all of the basic visual components. Any visual component can be assigned to almost any emotion, mood, situation or character trait. The visual exposition can define the meaning of every visual component in the same way that the story exposition defines the personality of characters, situations and locations in the story.

The visual rules defined in the exposition become the guidelines for everyone involved in the production. The visual component choices for space, line, shape, tone, color, movement and rhythm will determine the correct directorial choices, lenses, camera angles, locations, costumes, and design elements in any type of production. Visual rules create visual unity, a unique and well-defined visual style and a visual structure that parallels the story structure.

VISUAL CONFLICT & CLIMAX

Visual structure, like story structure, has a conflict and a climax. A story, large or small, internalized or externalized, is based on a conflict. A writer uses words to create story conflict and intensity. A musician uses melody and instrumentation to create musical conflict and intensity, and picture makers use space, line, shape, tone, color, movement and rhythm to create visual conflict and intensity.

Because any story is based on a conflict that builds in intensity to a climax (a point where the conflict must end) the picture maker should increase or decrease the visual intensity within a shot, from shot to shot or from sequence to sequence to parallel or mirror the conflict intensity in the story.

THE VISUAL RESOLUTION

In a story's resolution, the conflict ends and the story's intensity decreases. The visual intensity should usually do the same. The story resolution allows the author to tie-up loose ends and complete any unfinished story plot points. The visual resolution can support this diminished intensity.

In *Jaws*, the final shot of the film is a slow paced wide shot as the victorious survivors swim to shore. All of the visual intensity from the climax/climax is gone, and the final shot communicates an emotional calm.

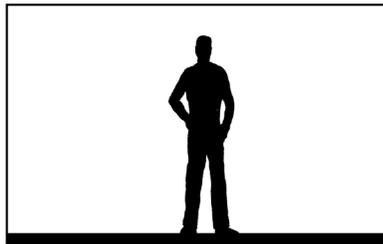
THE KEY TO VISUAL STRUCTURE

Visual structure and the control of its intensity are based on an understanding of The Principle of Contrast & Affinity.

Contrast means difference. Tone refers to the brightness of objects and can be used to illustrate contrast.



Tone can be organized using a gray scale. Contrast of tone means two shades of gray that are as different as possible in terms of brightness. The two gray tones with maximum contrast or difference are, obviously, the black square and the white square. A picture with maximum tonal contrast would use only black and white tones.



This shot, only black and white, is an example of maximum contrast of tone.

The opposite of contrast is affinity, which means similarity.



Any gray tones next to each other on the gray scale have affinity. A picture illustrating maximum affinity of tone would use a limited portion of the gray scale.



These shots are examples of tonal affinity. One uses only black and dark gray, and the other shot uses two light gray tones.

Every visual component (space, line, shape, tone, color, movement and rhythm) can be described and used in terms of Contrast & Affinity.

Contrast means difference, and *affinity* means similarity.

The Principle of Contrast & Affinity states:

**The greater the contrast in a visual component,
the more the visual intensity or dynamic increases.**

**The greater the affinity in a visual component,
the more the visual intensity or dynamic decreases.**

More simply stated:

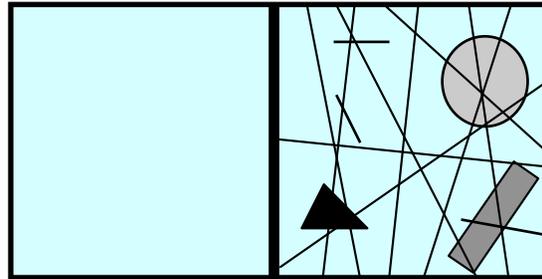
CONTRAST = GREATER VISUAL INTENSITY

AFFINITY = LESS VISUAL INTENSITY

What does “visual intensity” mean? A high-speed state-of-the-art roller coaster ride is intense; a sleeping kitten is not. A wild action sequence in a summer ‘popcorn movie’ is exciting; a photo of a motionless ocean on an overcast day is not. A computer game can be exciting, soothing or dull. A television commercial can be agitating or seductive. A documentary can be alarming or reassuring. These emotional reactions are based on the intensity or dynamic of the audience's emotional reactions when they see a movie, read a book, or listen to music. The audience’s reaction can be emotional (they cry, laugh or scream), or physical (their muscles tense up, they cover their eyes, they fall asleep). Usually, the more intense (contrasting) the visual stimulus, the more intense the audience’s reaction.

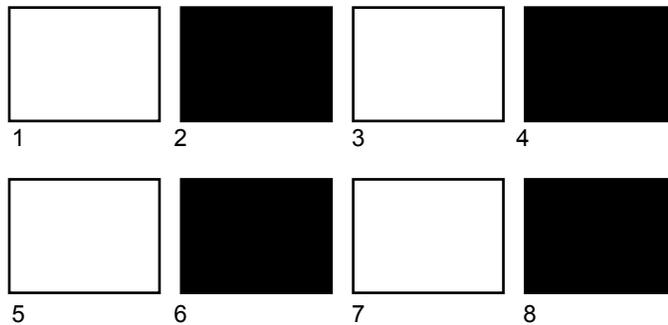
A good writer carefully structures words, sentences and paragraphs. A good musician carefully structures notes, measures and bars. A good cinematographer, game designer, director, production designer, or editor structures visuals by applying the Principle of Contrast & Affinity to the basic visual components.

The effect of the Principle of Contrast & Affinity is demonstrated here:

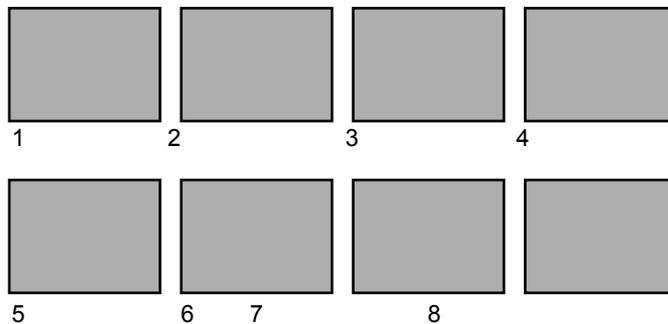


The right half of this picture is full of contrasting lines & shapes that create visual intensity. The left half lacks intensity due to the visual affinity. Each half of the picture has a different visual personality, which reveals itself as an emotional, intellectual or muscular response from the audience.

Here's another example:



This is a storyboard. Each shot lasts one second. The frame starts white and then goes black, then white, black, etc. This alternation of white/black will continue for a full minute. The audience's response is fairly predictable. The rapid assault of contrasting black/white shots will become intense. The film is all contrast; it may be too intense.

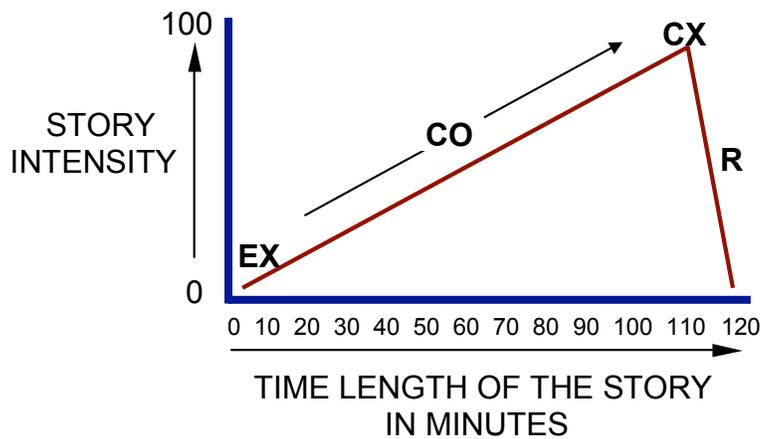


This is a revised storyboard. Every frame is the same gray tone; nothing changes. The audience will watch this for a full minute and, of course, find it dull and monotonous. The plan is all affinity. It lacks visual dynamic.

The contrast of the alternating white/black sequence is too intense, and the affinity of the gray sequence has no intensity at all.

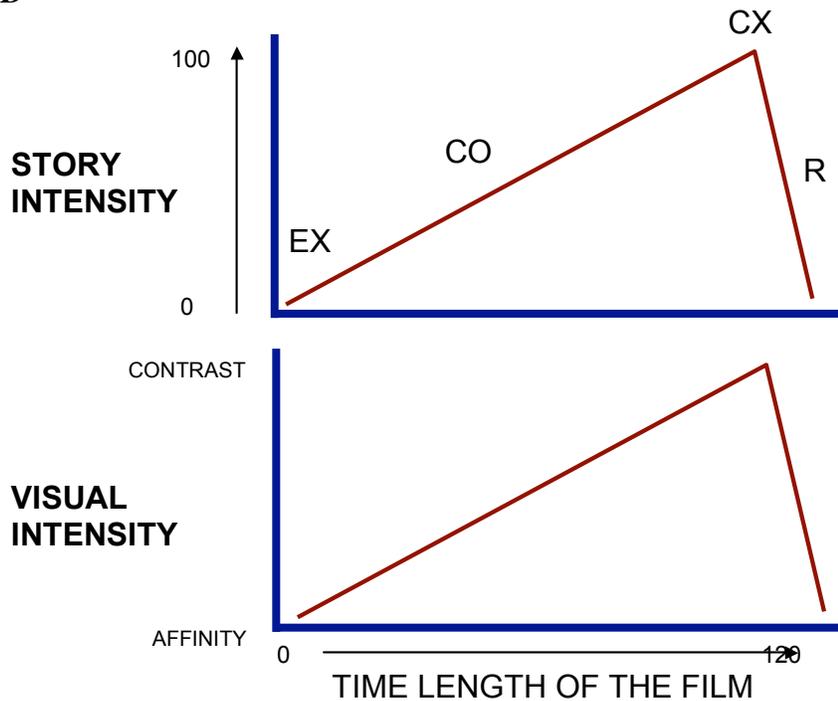
Although the Principle of Contrast & Affinity is simple, using it gets complicated. Each of the seven basic visual components (space, line, shape, color, tone, movement and rhythm) can be broken down into various sub-components, and all of them must be controlled and orchestrated using Contrast & Affinity. Controlling visual structure becomes possible when the basic visual components and the Principle of Contrast & Affinity are understood,

THE VISUAL STRUCTURE GRAPH GRAPH C



This familiar graph represents story intensity. The story can be a commercial, a short film, a series of levels in a computer game, a television show or a feature film. In any case, the graph indicates the story's exposition, an intensifying conflict, a climax and a resolution. A second graph can be added that represents the visual intensity.

GRAPH D



By placing a visual intensity graph directly below the story graph, the relationship between story and visuals becomes clear. The story graph indicates the story conflict intensity, and the visual intensity graph shows the amount of contrast or affinity in the visual components in direct relationship to the story. The visual intensity structure parallels the story structure. When the story structure gains intensity, the visual structure can do the same (or not depending on your visual plan).

In this graph, the story exposition lacks intensity so the visual exposition uses affinity to keep the visual intensity low. As the story conflict begins to intensify, the visual structure does the same by increasing contrast. The story climax is most intense, so the visual climax gains the most contrast. The story intensity diminishes in the resolution, and the visual structure reverts back to affinity reducing the visual intensity. By aligning the visual graph directly under the story graph, both structures can be compared at any point along the time line of the story.

There are hundreds or variations on the story and visual graphs. How you approach their relationship depends on your story, visual style and the affect you wish to have on your audience.