

# ART OF PHYSICS, PHYSICS OF ART

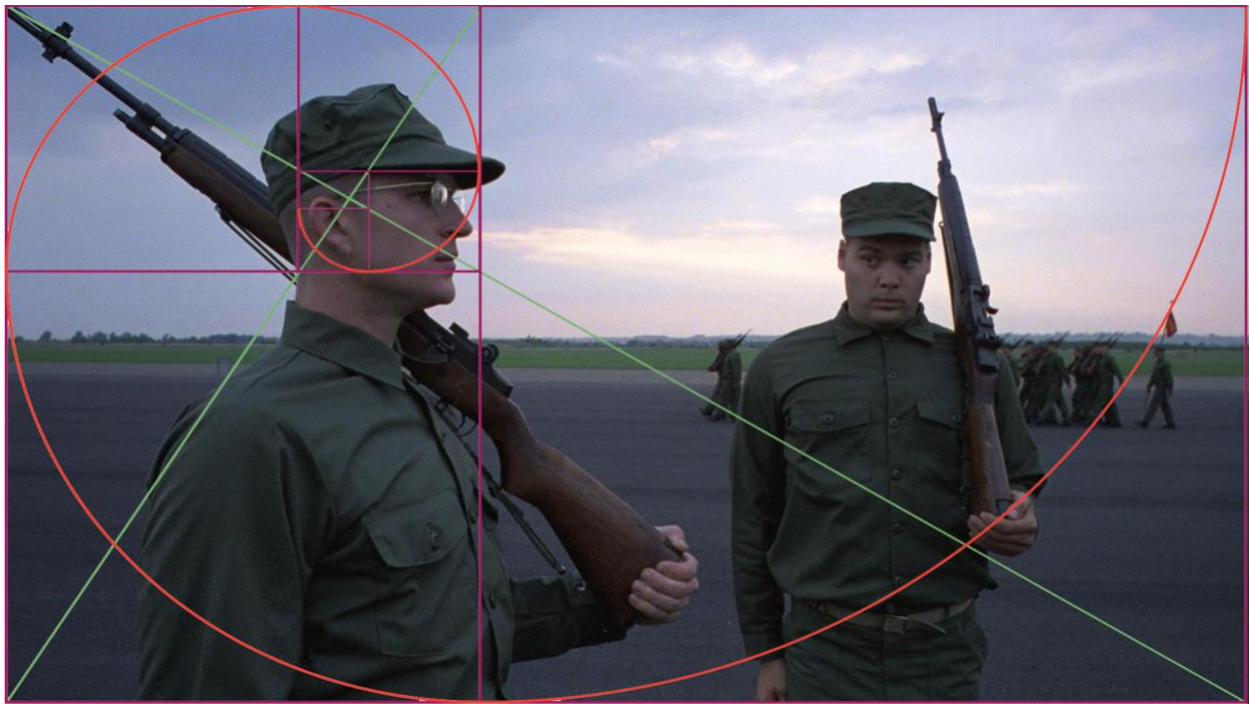
## SPACE MAKING

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### > WHY COMPOSITION MATTERS

Composition is the placement or arrangement of visual elements or 'ingredients' in a work of art, and can also be thought of as the organization of the elements of art. The term composition means 'putting together' and can apply to any work of art, from music to writing to photography, that is arranged on purpose. In the visual arts, composition is often used interchangeably with various terms such as *design*, *form*, *visual ordering*, or *formal structure*, depending on the context.



Film still from *Full Metal Jacket* by Stanley Kubrick, 1987

The more we understand the ideas and techniques of design, the more powerfully we can share our vision of the world with our viewers. Richard Schmid says, "what we are seeing when we are attracted to striking designs is simply artists' ingenious solutions to their particular problems of arrangement." Grasping the principles of design can certainly help your paintings. However, keep in mind that using principles and techniques as if they are rigid rules will squash the power and imagination out of your paintings. Our goal is to understand the *how* and *why* of these techniques, then creatively use or discard them to make our paintings flow exactly the way we want them to.

### WATCH: [Composition In Storytelling](#)

Artists use the visual art elements below to compose:

- Line < the visual path that enables the eye to move within the piece
- Color < hues with their various values and intensities

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- Texture < surface qualities which translate into tactile illusions
- Value < shading used to emphasize form
- Shape < areas defined by edges within the piece, whether geometric or organic
- Form < 3-D length, width, or depth
- Space < the space taken up by (positive) or in between (negative) objects

## WATCH: [Understanding The Elements Of Art](#)

### Lines:

Lines are much more than the outline of objects in our paintings. They should contribute to incredible expression, rhythm, movement, and harmony in our paintings.



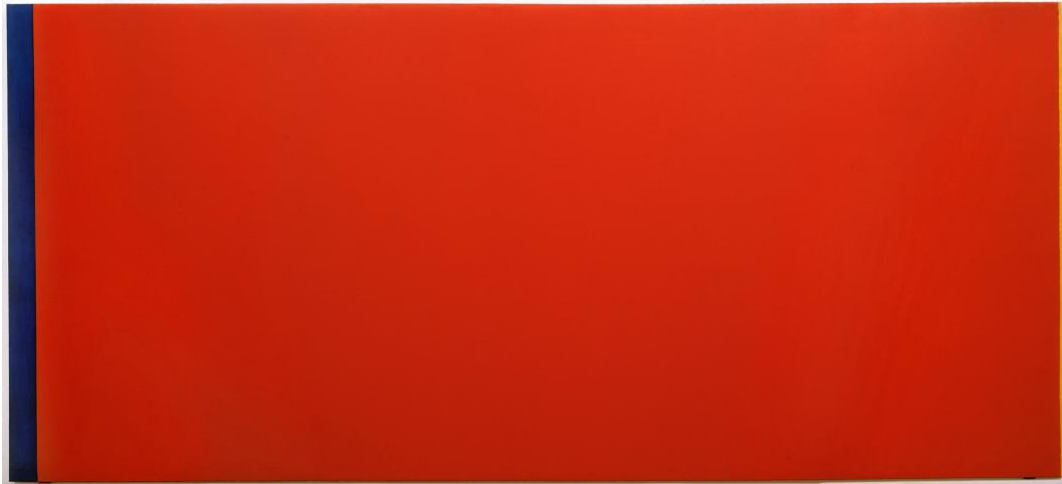
Bill Inman, *Colors of the Wind*

Each tree becomes a line, every tiny branch, the lavender color behind the trees, the path, the blades of grass—they each work as lines that contribute to the energy and rhythm in the painting.

### Color:

Warm and cool color temperatures, complementary colors, local color, relative color, the psychology of color: there are so many ways to use color as an artist. Color affects everything around us and makes the world spectacular.

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Barnet Newman, *Who's Afraid of Red, Yellow, and Blue III*, 1967

Color psychology is cultural. America might favor a white wedding dress, but China loves red and uses white for funerals. While we don't necessarily want to focus on color as a universal psychological tool, the dynamics of color in nature offer a universal language.

## Shape | Pattern:

Shapes and patterns are the underlying flow or plan of the structure that organize the image. The most noticeable trait of pattern is connecting all the key dark or light shapes together, unifying shapes that flow through a composition. When we squint at an image with strong light and dark patterns we quickly see their separation. Often that pattern stands out even without squinting. Whether we want the underlying patterns to be subtle (to keep the interest of the viewer growing gradually), or obvious and dramatic (to draw the viewer in quickly and forcibly), forming light/dark patterns in the initial stages can quickly establish the tone or message of the painting.

Squint and you'll easily see the definite placement and separation of strong light and dark shapes in the work below.



Steve Huston, *Pull #2*



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Notice that Huston keeps the values distinct. Even in the lighter top arm the values are kept dark enough to clearly separate from the light background values. Separation of values creates a visual harmony for the viewer. We aren't confused by what is part of the figure and what belongs to the background.

## Dominance | Focus

Also known as the **focal point** – the area in your painting you most want the viewer to appreciate. One idea shared overwhelmingly by artists is that a painting's impact on the viewer is stronger if one theme is dominant. Just as connecting dark or light shapes in the pattern of our paintings can be more powerful than a haphazard disconnected scattering of shapes, so is it with one dominant area of interest compared to multiple. It brings clarity and focus which can help engage the viewer because they feel they understand what's expected of them.

## WATCH: [Drive - The Quadrant System](#)

## Balance

Richard Schmid says “If I can describe why a picture looks out of balance to me – exactly which thing bothers me – I am at the same time providing myself with the solution to correct it. If I am unhappy with things shoved to one side, I can just move them to the center, or the other side, or wherever I please. That's all there is to it. There is no right place to put things except where they look best to me.”



Kerry James Marshall, *Untitled (blot)*, 2015

A lot of fuss has been made over the years about how to balance a painting. Each painting is a new challenge, a unique puzzle, that requires new ways of thinking and a fresh approach to balance. There is no formula. Keep in mind that balance is largely based on a feeling rather than a formula. If you feel something is off, or your trusted second set of eyes feels it's unbalanced, then fix it.

## WATCH: [The Rise Of Minimalism](#)

## Movement | Rhythm:

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We usually want the viewer to roam around our paintings. Whether we have one focal point or many, our goal is to have the entire painting engage the viewer. Like rhythm or the beat in music, movement in a painting is created using elements like line, shape, texture, or brush strokes in a regular pattern that move the viewer's eyes in a choreographed arrangement, like a dance.



Julie Mehretu, *Excerpt (citadel)*, 2003

## Equalization Effect:

There isn't a definite area of interest or focal point. The focus of these paintings is to stimulate effect, rather than craft a message, story, or place. It's about textures, movement, and the psychological effect it has on the viewer.



Jackson Pollock, *Blue Poles*, 1952

Jackson Pollock is most known for the Equalization Effect, most notably in his drip paintings. There is no clear center of interest and the effect is a feeling of energy and movement. Equalization does not mean that every value, texture or color is the same throughout. If a color is used, like a yellow drip in one area, that yellow or another like it will be used in other areas around the painting with no single yellow being more dominant than another. Each color, value, or shape will also have variety such as the *Blue Poles*



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(above). They tilt in slightly different directions and with varying widths and treatment. Notice, however, that no single 'pole' is more important than another.

## Perspective | Depth | Space



Film still from *Children of Men* by Alfonso Cuarón, 2006

One of the greatest contributions to realist art was the discovery of perspective. Getting perspective portrayed accurately in your paintings is critical. The viewer will know instinctively if your image is off, especially with regards to perspective. It is one of the primary tools we have to create a feeling of depth. There are several perspective strategies. The one you may be most familiar with is Italian, pioneered by Leonardo da Vinci. There's also hierarchical perspective: think early Egyptian hieroglyphics, early Christian art, Japanese woodblock prints.

## WATCH: [Don't Ignore The Background](#)

### > COMPOSITION TYPES

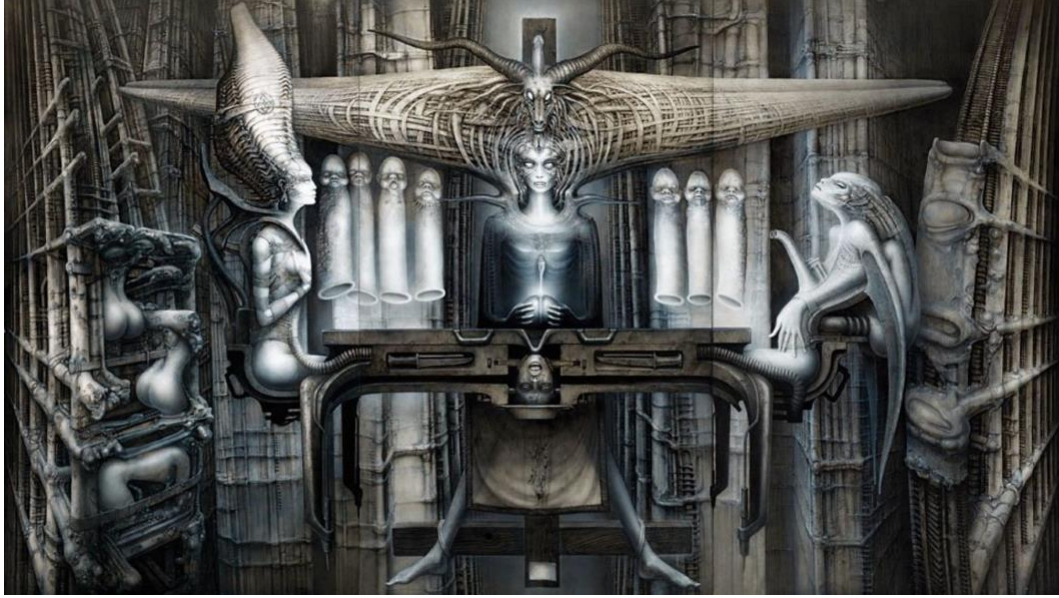
#### Continuity or Continuation:

The easiest way to think of this is when it feels like someone is looking in a specific direction. This can also be accomplished using a figure staring in a certain direction in the painting. The viewer's eye will tend to follow the line of sight. An implied line is created which the viewer follows. We are compelled to move from, or through, one object to another.

#### Figure-ground Relationship:

This refers to the separation (or not) of the focal object (or positive space) and the background (or negative space).

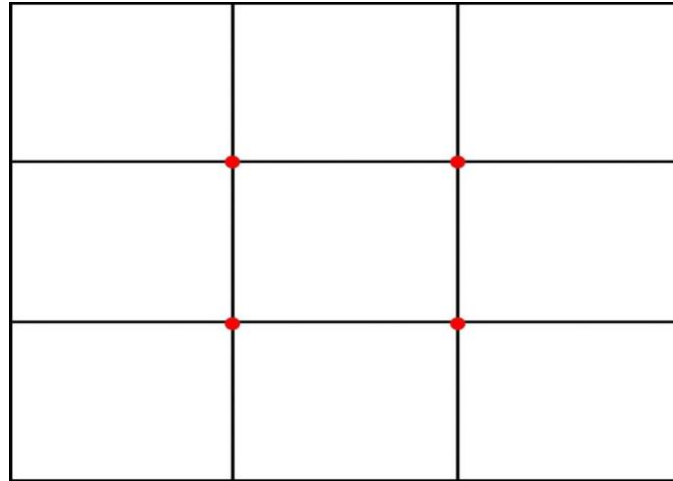
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H.R. Giger, *The Spell II*, 1974

## Rule of Thirds:

In the rule of thirds, you divide your painting with two vertical and two horizontal lines into 9 basically identical rectangles – or more simply said, you divide it into thirds.



The idea is to place our center of interest near or at one of the intersecting points (the red dots). That gives us an easy way to keep the center of interest in an asymmetrical position (or a spot more interesting for the viewer than right in the middle).

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Let us take this winter scene. Observe how the horizon line is about in the middle. For most artists, they consider that a terrible thing to do. The road also leads us nearly to the center of the photo. The rule of thirds helps us create a more compelling composition by shifting the horizon line to one of the dividing lines. We can move the horizon down and the road to the right, closer to an intersecting point.

## WATCH: [The Golden Ratio Vs. The Rule Of Thirds](#)

### > SEQUENTIAL TRANSITIONS

In comics, storyboarding, and sequential art there are six main types of compositional strategies:



Bill Watterson, *Calvin and Hobbes*

**Moment-to-moment** is one of the most common forms. It features transitions with extremely small increment of subject movement requiring no closure. Think of it as a blink or two between seconds of a film, it can be used to slow down and draw out action. It is use frequently when storyboarding. If over used it can make your comic dull and laborious to draw and read.

A **scene-to-scene** transports readers across significant distances of time and space.

A **non-sequitur** transition offers no logical relationships between panels whatsoever.



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Jonathan Hickman, writer and Pepe Larraz, artist

**Action-to-action** is the next most common, and a workhorse of superhero comics. It's basically a less finely sliced version of moment-to-moment, and typically focuses on significant events or movement from panel to panel, and over larger intervals of time between moments.

A **subject-to-subject** cuts between two related moments, or focuses on different subjects in the same scene. Think conversation in a restaurant, or a shift of focus onto another actor in the scene.



Film still from *Ghost in the Shell* by Mamoru Oshii, 1995

An **aspect-to-aspect transition** essentially stops time to provide multiple viewpoints of the same scene in order to establish a specific mood, feeling or emotion. This **transition** can be thought of as “the wandering eye” that changes viewpoints to show all that takes place within a specific time frame. It can be an interesting way to jump around a scene, taking in key details or letting the characters focus wonder.

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It's also a good way to introduce their environment to a reader, though the players eyes perhaps or inviting them to wonder away from the players a bit.

**WATCH: [Identity In Space](#)**