Visual Literacy + Composition

Elements, Composition, Form, Technique
Visual Literacy
Donis A. Dondis

Verbal Literacy
capable of reading and writing
clear understandable prose, correctly spelled + syntactically sound
operative at many levels

Visual Literacy
capable of understanding what is workable, appropriate, effective?

Visual Data
1) visual input 2) representational 3) abstract
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Visual Data
Symbols - words, calligraphy, pictograms
Representational - extends beyond perception to experience and recognized environment
Abstract understructure - elemental composition

Visual Literacy through:

1. Interactive functional relationship between visual stimuli and the human organism - physically and psychologically
2. Character of Visual Elements - dot, line, shape, direction, tone, color, texture, scale, dimension and motion
3. Visual techniques as forming agents - contrast, balance...
   4/5. Style - personal and cultural. Medium - character + limitations
Composition
Syntax or visual problem solving

Act of seeing - response to light: TONAL

Physical System + Psycho-physiological
General Overview

TRANSDUCTION
Environmental energy is converted into electrical nerve impulses by receptor cells.
Receptor cells are connected to specialized areas of the cerebral cortex.
Visual Perception
George Mather

General Principles

PHYSIOLOGICAL

✴ Neural impulses trigger neurotransmitters to be released by synapse
✴ Hierarchical processing
✴ Selectivity of sensory space in multiple dimensions
✴ Organization - topographical map
✴ Specific Nerve Energy - destination
✴ Plasticity - adaptability over time
✴ Noise - response rate differs
General Principles

PERCEPTUAL

- Sensation - stimulation of sense organ causes a private, mental state
- Detectability - probabilistic
- Sensory magnitude
- Adaptation - matched to prevailing stimulation
Visual Perception
George Mather

General Principles

THEORETICAL

✴ Representation - a physical system (brain) represents another system (world).
  ✴ Thermometer, Wristwatch
  ✴ Analog (pictoral) and Symbolic (digits)
✴ Computation - manipulating quantities or symbols
  ✴ Algorithms - from one representation to another
✴ Linking Propositions
✴ Decision Rules

Structuralist - Gestalt - Constructivist - Ecological - Computational - Phenomenology - Neurophysiological
Visual Perception
The physics of vision

**Light** is a form of radiant energy capable of stimulating receptors in the eye and evoking a visual sensation.

Light: ray, particle, wave

Quantum Mechanics - let’s not go there

Absorption, reflection, transmission

Intensity and adaptation

Contrast and reflectance

Wavelength - 400 - 700nm
Color spectrum - ROYGBIV from 700 to 400
Visual System:
Retina, Visual pathway, Visual Cortex

Retina
Photoreceptors (120 million)
Inner nuclear
Ganglion cells (1 million)

Information Filtering
Spatial, chromatic, temporal
Adding to the Primal Sketch

Constructing representations of objects present in a scene

Three-Stage Model
Visual Perception
Shape and Object Perception

**Shape Representation**
*Gestalt Laws*

Rules of perceptual organization:
Proximity, Similarity of color and size, Common fate, Good Continuation

Handicapped by lack of physiology knowledge

P: objects made of cohesive, opaque material
S: objects made of few materials
C: objects parts tend to move together
GC: objects contour smoothly - beach pebble
BALANCE - STRESS - LEVELING - SHARPENING - LOWER LEFT
ATTRACTION - GROUPING - POSITIVE - NEGATIVE

GESTALT PRINCIPLES
<table>
<thead>
<tr>
<th>Contrast</th>
<th>Harmony</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability</td>
<td>Balance</td>
</tr>
<tr>
<td>Asymmetry</td>
<td>Symmetry</td>
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<tr>
<td>Irregularity</td>
<td>Regularity</td>
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<tr>
<td>Complexity</td>
<td>Simplicity</td>
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<tr>
<td>Fragmentation</td>
<td>Unity</td>
</tr>
<tr>
<td>Spontaneity</td>
<td>Predictability</td>
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<tr>
<td>Activeness</td>
<td>Stasis</td>
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<tr>
<td>Variation</td>
<td>Consistency</td>
</tr>
<tr>
<td>Distortion</td>
<td>Accuracy</td>
</tr>
<tr>
<td>Depth</td>
<td>Flatness</td>
</tr>
<tr>
<td>Juxtaposition</td>
<td>Singularity</td>
</tr>
<tr>
<td>Randomness</td>
<td>Sequentiality</td>
</tr>
<tr>
<td>Sharpness</td>
<td>Diffusion</td>
</tr>
</tbody>
</table>
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BALANCE

Our firmest and strongest visual reference

Felt Axis - Horizontal + Vertical

Where we look first
STRESS

Lack of regularity
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LEVELING + SHARPENING

Harmony and Stability

Figure 6: Harmonious leveling of a structural map

Unexpected and Stressful

Figure 7: Stressful sharpening of a structural map
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LOWER LEFT
Top Down
Left to Right
Western Printing
ATTRACTION + GROUPING

Law of Pragnanz:
Psychological ordering as good as conditions allow

Least complicated and simplest through symmetry

Law of grouping:
Need to make wholes of units - stars as constellations
Affected by similarity - size, texture, tone
POSITIVE + NEGATIVE

Active Stress and negative form

Dominates the eye

Ambiguity
Visual Literacy

Elements of Communication

Intro courtesy of FBDO
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Elements of Communication

**DOT:** simplest minimum unit of visual communication

Roundness in nature is the most common formulation

Used for measuring space

In profusion can indicate tone and color

Four-color halftone and pointillism
Elements of Communication

**LINE:** chain of dots where sensation of direction is increased

Dot in motion

History of a dot’s movement

Enormous energy

Essential tool of previsualization

Tool for notation
SHAPE: line articulates the complexity of shape

Circle, Square, Triangle

Unique character and meaning:
Association, arbitrary, psychological and physiological
Elements of Communication

**DIRECTION:** expressed by basic shapes

Horizontal, vertical, diagonal, curve

Stability, instability, repetition
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Elements of Communication

**TONE:** juxtaposition of intensity of lightness or darkness

Light is not uniformly shed

30+ tones of grey

Denotes dimension

Essential for survival
Elements of Communication

**COLOR:** chromatic world
Emotional, associative, symbolic meanings

Hue - (primary) red, yellow, blue

Saturation - purity of color from hue to grey

Brightness - achromatic level from light to dark of tonal gradations
30+ tones of grey

Absence or presence of color does not affect tone
Elements of Communication

**TEXTURE**: stand-in for touch

Mostly optical, not tactile

Reference through minute variation
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Elements of Communication

**SCALE:** established through relative size and relationships to the field

Greek Golden Mean

Le Corbusier Modular Unit
Elements of Communication

**DIMENSION:** illusion of perspective

Observed through stereopticon sight

Implied in 2-D representation

Perspective reinforced by tonal manipulation
Elements of Communication

**MOVEMENT:** implied in the visual mode

One of dominant visual forces

Trick and suggestion

Distortion and implicit
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Techniques of Communication

- balance
- instability
- symmetry
- asymmetry
- simplicity
- complexity
- unity
- fragmentation
- predictability
- spontaneity
- consistency
- variation
- sequentiality
- randomness
- repetition
- episodicity
CONFECTION:
“an assembly of many visual events, selected...from various Streams of Story, then brought together and juxtaposed on the still flatland of paper. By means of a multiplicity of image-events, confections illustrate an argument, present and enforce visual comparisons, combine the real and the imaginary, and tell us yet another story” - Tufte, p121, 1997
CONFECTION:
Constructed according to two general strategies: ‘compartments’ (used to structure visual lists, how-to-drawings, numbered sections) and ‘imagined scenes’ (drawings depicting scenes and things never represented together before) [Tufte p127 1997].
Visual Literacy
Winsor McCay

Little Sammy Sneeze: 1904
Cinematic Conventions
Visual Literacy
Winsor McCay

Perspective + Point of View
Color

Aesthetic +
Emphasis
Visual Literacy
Winsor McCay

Little Nemo in Slumberland
Stories based on his son
Perspective + Depth
Visual Literacy
Winsor McCay

Architecture
Visual Literacy
Winsor McCay

Framing
Visual Literacy
Chris Ware

Composition
Visual Constraints
Lack of Movement
Yet Dynamic
Multiple Narratives
Reuse of Images
Visual Literacy
Chris Ware

Composition
Multiple Narratives
Reuse of Images
Visual Literacy
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Composition
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Composition

Color
From “Understanding Comics”

Words, pictures and icons “are the vocabulary of the language called comics”

Creating a comic includes:
choosing the moment to represent, the angle to frame the moment, the imagery to
depict the moment and the words that will enhance the image and add value to the story

The comic author invokes structural (panel sizing, page composition) and stylistic
(line type, color) strategies to create additional narrative context surrounding the chosen
moment in an imaginative rendering of sequential moment panels. Meaning is created
both within the composition of the specific moment panel itself and in the movement of
the narrative from panel to successive panel.

http://scottmccloud.com/
http://www.google.com/googlebooks/chrome/index.html