

# Intro to Fine-Art

## Black & White Photography:

### *Notes & Musings*

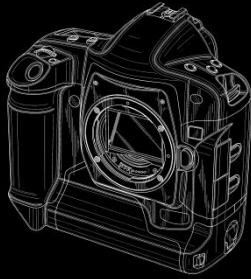


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<http://tao-of-digital-photography.blogspot.com>

# Outline of Class

## Four Dimensions of Photography



- **Practical Dimension**  
*Cameras, lenses, filters, bags,...*



- **Technical Dimension**  
*Metering, f-stops, focus, ...*



- **Artistic Dimension**  
*Aesthetics, composition, design, ...*



- **Philosophical Dimension**  
*What does your photography mean?  
...to you? ...to others?*

Our  
main focus  
in this  
workshop

With a  
bit of ...

With a  
bit of ...

# Outline of Class

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## Musings: Five Take-Away Points

- **Photography:** The art of capturing what a “thing” is
- **Fine-art photography:** The art of capturing what else a thing is
- **Color photography:** Any type of photography in which color is the main focus of attention or in which color is the primary visual tool that is selectively used to focus the viewers attention
- **B/W photography:** Any type of photography in which form, tone, texture, and pattern are the main focus of attention
- **Content / presentation:** All forms of photography depend on the same basic set of compositional / aesthetic principles

# Don't Miss the Forest for the Trees

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## Forest

Point-and-shoot photography is  
all about grabbing the shot (of something)

*Oh, what a lovely tree... where's my camera?...click....let's go*

Fine-art photography is all about  
doing everything possible (before / during / after a shot)  
to communicate feelings to someone else

*I'm so happy here...what beautiful light...how calm everything is...  
it's as though nothing else exists...a gentle breeze...serenity...*



# Don't Miss the Forest for the Trees

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*Now, on to the...*

## Trees

This workshop is offered as a first step towards developing the *skills* – and *frame of mind / eye / I* – to become a fine-art photographer

# Don't Miss the Forest for the Trees

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*A point-and-shoot photograph of Hawaii*



<http://tour.airstreamlife.com/wordpress/wp-content/uploads/2007/11/oahu-north-beach.jpg>

# Don't Miss the Forest for the Trees

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*A fine-art photograph of Hawaii*



“Seeing is not enough; you have to feel what you photograph. “

— ANDRE KERTESZ, *Photographer* (1894 - 1985)

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- Who is this guy, and why should I listen to him?
  - And why you *ought not* listen to him
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- Fine-art photography
  - A closer look
- Color → black & white :: Part 1 - *examples*
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- Extra :: portfolio samples / East vs. West in art / “complexity”

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# Who am I?

... and why you ought and **ought not** listen to me ;-)

Whatever I may know  
about light, tone,  
texture, form, and  
composition  
I learned by  
watching my dad.

He was not a  
photographer,  
but was an artist  
*par excellence*

Everyone's vision  
is their own ...

*The trick is to find it !*

"If the path before you is clear, you're  
probably on someone else's."

— Joseph Campbell

- **Born 1960 / Long Island, NY**
- **First camera: 1970**  
Polaroid instamatic / Christmas gift  
First picture: *(abstract?) closeup of my right toe*
- **First "serious" camera: 1982**  
*Canon AE-1*
- **Ph.D. Theoretical Physics, 1988**  
*Complex Adaptive Systems*
- **First "serious" digital camera: 1998**  
*Nikon Coolpix 950*
- **First DSLR: 2001**  
*Olympus E-10*
- **First Solo Show: 2007**  
*Coral Gables, Florida*
- **First *Lenswork* portfolio: 2007**  
DVD Edition #71 / July-August
- **First art co-op: 2008**  
One of 14 founding members at Lorton Arts, VA



# Recent Activity

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- "Worlds Within Worlds" Exhibit (2009-2010)  
American Physics Center
- 1<sup>st</sup> Prize, Juried photo exhibit (2009)  
*RoHo Photo Gallery*, Cincinnati, OH
- Photography Workhouse Society, 2008/09  
*Lorton Arts*, VA
- Featured photographer (*Lenswork Magazine*)  
*LOOK3 Photo Festival*, Charlottesville, VA, 2009
- Wall calendar and datebook  
*Change Your Mind, Change Your Life*  
by Wayne Dyer (Amber Lotus Publishing, 2010)
- Featured Artist / After Words  
*Northern Virginia* magazine, August 2009
- "Micro Worlds" portfolio  
*Lenswork* magazine, Print & Extended Edition  
Issue #76 (May-June, 2008)
- Merit award, single-image contest  
*Black & White* magazine (2008)
- Semi-finalist, *Photographer's Forum* magazine  
Annual Contest , 2008
- Honorable mention  
*Photo Techniques*, portfolio contest, 2008
- Solo Exhibit (32 Photographs, 2007)  
*Books & Books / Gallery*, Coral Gables, FL
- Honorable Mention  
*Photo Techniques*, Portfolio Contest, 2007
- "Spirit & Light" portfolio  
*Lenswork* magazine, Extended Edition  
Issue #71 (July-August, 2007)
- Winner of book contest, 2007  
U.K. *B&W* magazine and *Envisage Books*
- "Entropic Melodies Series" portfolio  
*Focus Magazine*, April 2006
- Merit of Excellence (Abstracts)  
2007 *B&W Spider Awards*
- Portfolio contest winner  
*Black & White* magazine, Feb 2006
- Merit award, *Abstract Exposure*  
Oct 2006 juried on-line exhibit
- Finalist, *Photographer's Forum* magazine  
Annual Contest , 2005
- Third Place, photo contest  
*Sybex Publishing* gallery contest, 2005

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## Step 1

Photography = a *language*

“...the concept underlying this phrase  
is a very important one...”

Just as in the media of the written word  
we have poems, essays, scientific and  
journalistic reports, novels,  
dramas and catalogues,  
so with photography we touch the domains  
of science, illustration, documentation  
and expressive art.”

— ANSEL ADAMS

*Photographer* (1902 - 1984)

## Step 2

Photography = *Communication*

“Understand what you want to say!

Understand how you want to say it!

Then say it without compromise!

Now you are thinking in terms of  
creative photography!”

— BRUCE BARNBAUM

*The Art of Photography* (2010)





Step 3  
Photography = *Feelings*

“The key is to not let the camera,  
which depicts nature in so much detail,  
reveal just what the eye picks up,  
but what the heart picks up as well.”

— PAUL CAPONIGRO  
*Photographer (1932 - )*





## Step 4

### Photography = *Constant Picturetaking!*

“To be a photographer,  
one must photograph.  
No amount of book learning,  
no checklist of seminars attended,  
can substitute for the  
simple act of making pictures.

Experience is the  
best teacher of all.

And for that,  
there are no guarantees that  
one will become an artist.  
Only the journey matters.”

— HARRY CALLAHAN  
*Photographer (1912 - 1999)*





## Step 5

### **Photography is all about...**

“...how you build a picture,  
what a picture consists of,  
how shapes are related to each other,  
how spaces are filled,  
how the whole thing  
must have a kind of unity.”

— PAUL STRAND  
*Photographer* (1890 - 1976)



## Step 6

Photography = *a personal journey*

“A man's work is nothing but  
this slow trek to discover,  
through the detours of art,  
these two or three  
great and simple images  
in whose presence his  
heart first opened.”

— ALBERT CAMUS



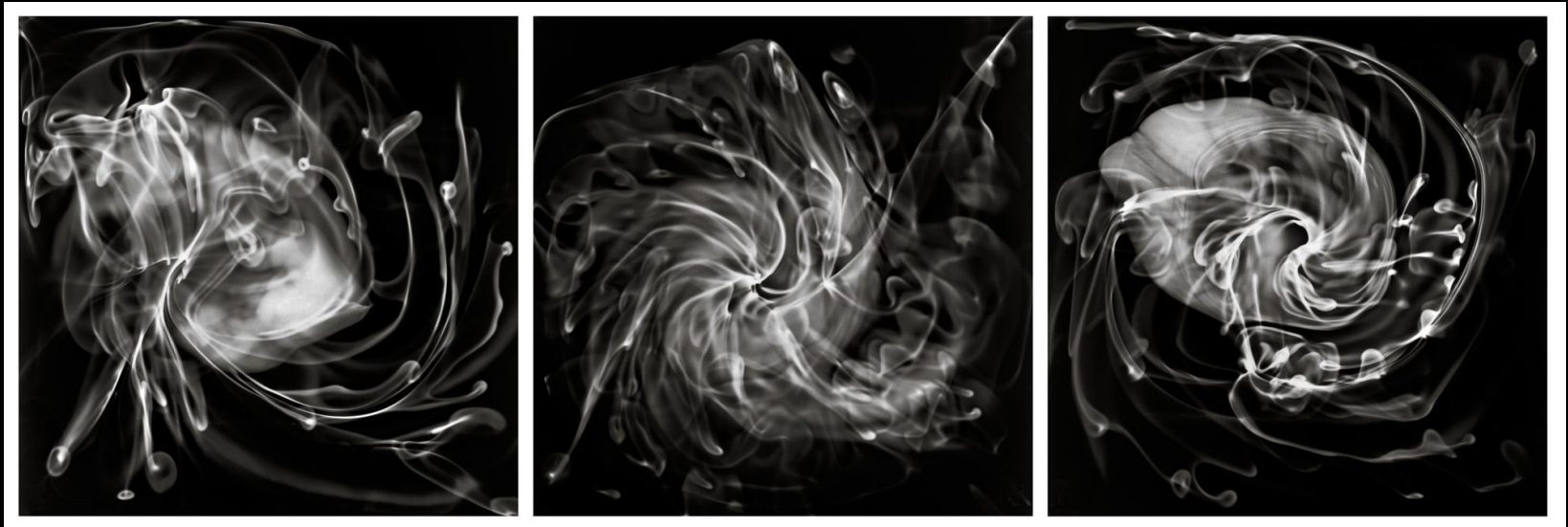
One last step  
(seldom taught)

Concerning the *art*  
of fine-art photography

“One should not only  
photograph things  
for what they are,  
but for what *else* they are.”

— MINOR WHITE  
*Photographer* (1908 - 1976)

*Ordinary ink in water...*



...transformed into *extraordinary* organic forms



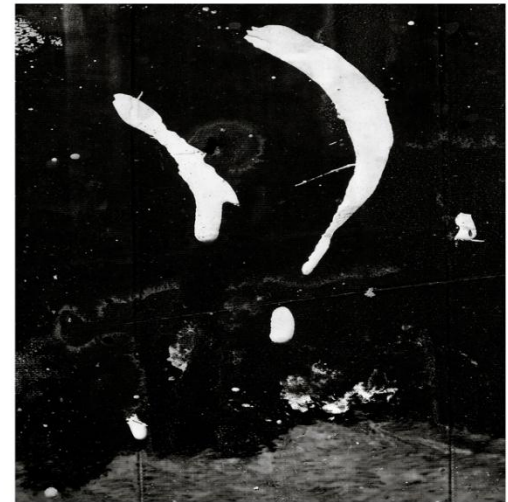
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“One should not only  
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— MINOR WHITE  
*Photographer* (1908 - 1976)

Ordinary dollops of paint...



...transformed into mysterious glyphs of a lost language



One last step  
(seldom taught)

## Concerning the *art* of fine-art photography

“One should not only  
photograph things  
for what they are,  
but for what *else* they are.”

— MINOR WHITE  
*Photographer* (1908 - 1976)

An ordinary candle holder...



...transformed into otherworldly realms

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# Ansel Adams: *A Lesson from the Master*

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Ansel Adams, *Moonrise Over Hernandez*, New Mexico, 1941

<http://www.alindergallery.com/moonrise.jpg>

# Ansel Adams: *A Lesson from the Master*

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**Contact Print**

What Ansel's camera saw!



**Auto Curves**

What *Photoshop* does without the  
photographer's intervention (or vision)

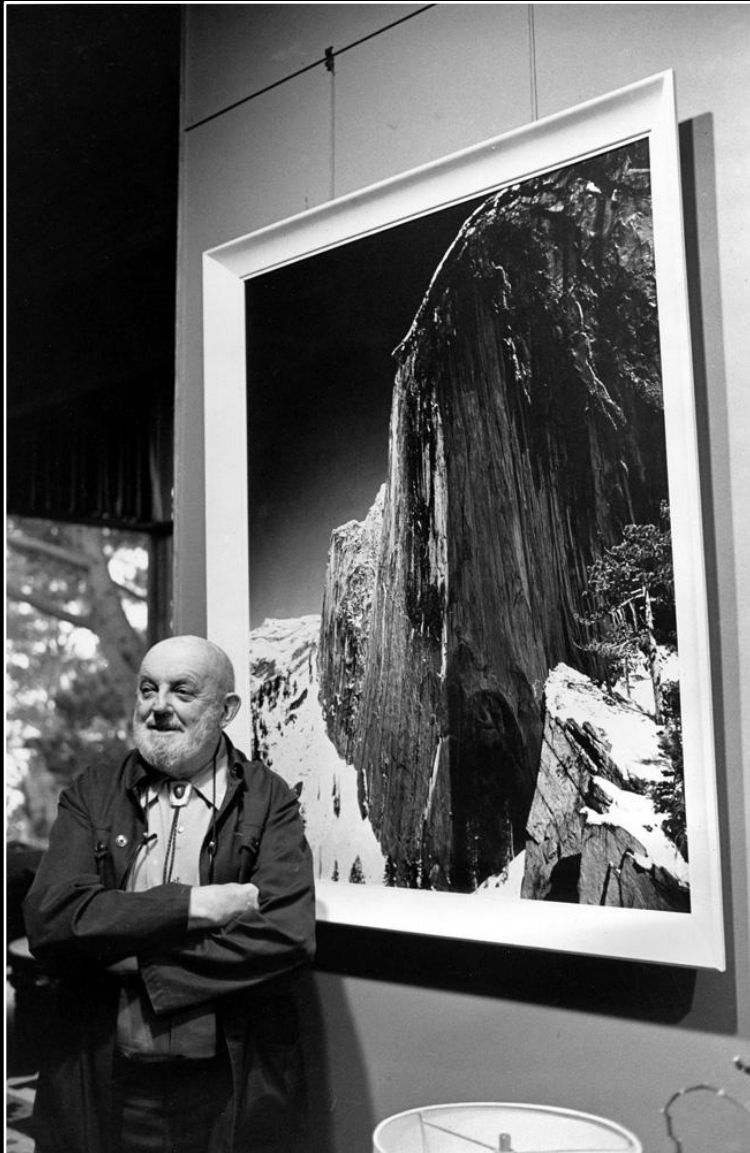
# Ansel Adams: *A Lesson from the Master*

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“Point-&-shoot photography *begins and ends* with the shot;  
Fine-art photography starts *even before it!*”

# Ansel Adams: (Pre-) *Visualization*



As I replaced the slide, I began to think about how the print was to appear, and if it would transmit any of the feeling of the monumental shape before me in terms of its expressive-emotional quality. I began to see in my mind's eye the finished print I desired: the brooding cliff with a dark sky and the sharp rendition of distant, snowy Tenaya Peak. **I realized that only a deep red filter would give me anything approaching the effect I felt emotionally.** I had only one plate left. I attached my other filter, a Wratten #29(F), increased the exposure by the sixteen-times factor required, and released the shutter. I felt I had accomplished something, but did not realize its significance until I developed the plate that evening.

I had achieved my first true visualization!

I had been able to realize a desired image: not the way the subject appeared in reality but how it felt to me and how it must appear in the finished print.

— Ansel Adams, *Autobiography*, p. 76



# Capturing an image → *Crafting an image*

"The negative is comparable to the composer's score and the print to its performance.  
Each performance differs in subtle ways. " - Ansel Adams



# Capturing an image → *Crafting an image*

"The negative is comparable to the composer's score and the print to its performance.  
Each performance differs in subtle ways. " - Ansel Adams



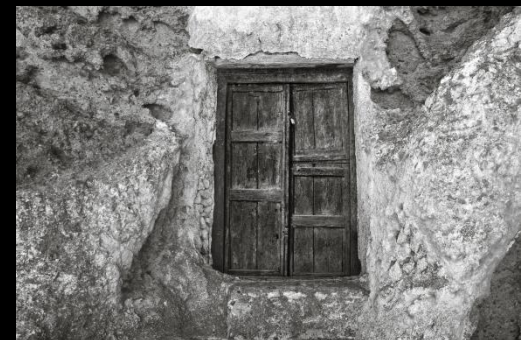
"Score" = Original raw capture / default settings



"Performance" #1



"Performance" #2



"Performance" #3



# Dimensions of a photograph

## Dimensions of "Reality"

Context  
Legality  
Light  
Mood  
Sound  
Space  
Time  
Weather



## Dimensions of Photographer

Aesthetic  
Emotional  
Intellectual  
Musical  
Mystical  
Personal  
Philosophical  
Political  
Sensual  
Social  
Symbolic  
Synesthetic



## Dimensions "evoked" in Viewer

Aesthetic  
Emotional  
Intellectual  
Musical  
Mystical  
Personal  
Philosophical  
Political  
Sensual  
Social  
Symbolic  
Synesthetic



## What can a Photographer do?

Find subject matter  
Wait for "best" light / conditions  
Choose vantage point  
Frame / cropping  
Plane of focus  
Exposure time

Postprocessing  
(Photoshop, ...)

**Tonal manipulation**,  
skillfully & artfully applied,  
focuses photographer's  
intended message

# Capture *Process*, not Disconnected Things

## Decisive Moment

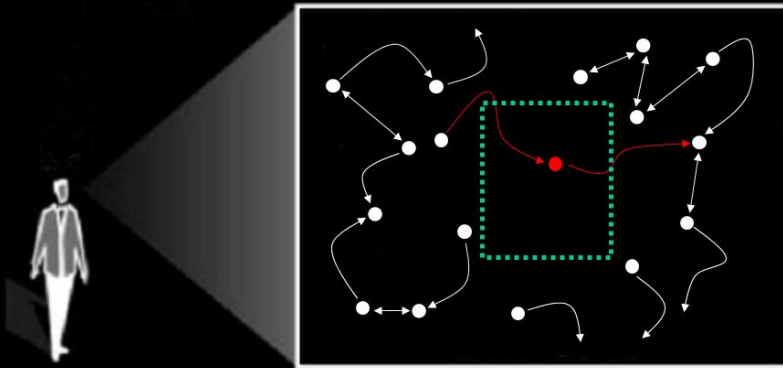
*Decisive Moment* = “The simultaneous recognition, in a fraction of a second, of the significance of an event as well as the precise organization of forms which gives that event its proper expression.”

“Above all, I craved to seize the whole essence, in the confines of one single photograph, of some situation that was in the process of unrolling itself before my eyes.”

— Henri Cartier Bresson (1908 - 2004)

How to take a *snapshot*...

- Focus on a thing(s)
- Wait for all “distractions” to disappear
- Click the shutter



# Capture *Process*, not Disconnected Things

## Decisive Moment

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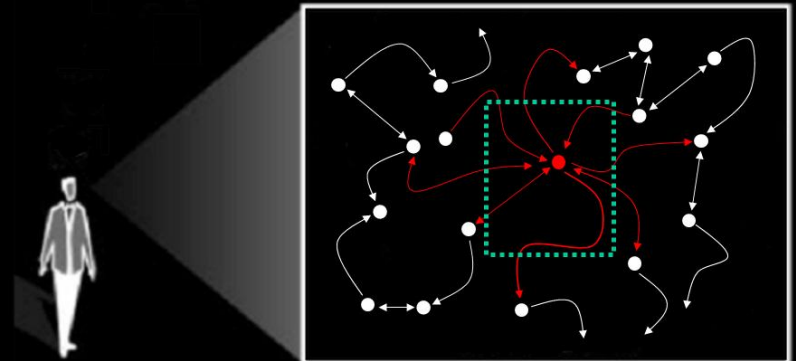
This is not a picture of my son, his hand, or the ripples in the water...

It is a picture of *what my son is doing !*



How to take a *photograph*...

- Focus on what is happening
- Wait for all the interconnections to become clear
- Click the shutter



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# Black & White vs. Color

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Major distinction...



Color *depicts* reality

# Black & White vs. Color

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Major distinction...

Black & White  
(allows the  
photographer to)  
*interpret* reality



# Black & White vs. Color

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- B&W images are – by their nature – *abstract* and can tolerate much more tonal manipulation without sacrificing realism
- Require a different – *deliberate* - style of “seeing”
  - Ansel Adams was a great B&W “seer” and photographer; But he was (arguably) only a “so-so” color “seer”
  - Tip: if you are using a DSLR, set picture style to B&W to use LCD for previewing compositions in B&W
- Allows *selective focus* of viewer’s attention
  - Toning / burning / dodging / ...
- Not all subjects are suitable for B&W; those that are, tend to have these properties in common:
  - Color is not the primary (or even secondary) focus
  - The graphic content of the image is strong without color
  - Color is a distraction to the overall “mood” of the picture
  - The scene includes interesting contrast between light and dark
  - Shadows play an important role in the composition
  - You want to deliberately inject an “old fashioned” feel into the image

# Black & White vs. Color

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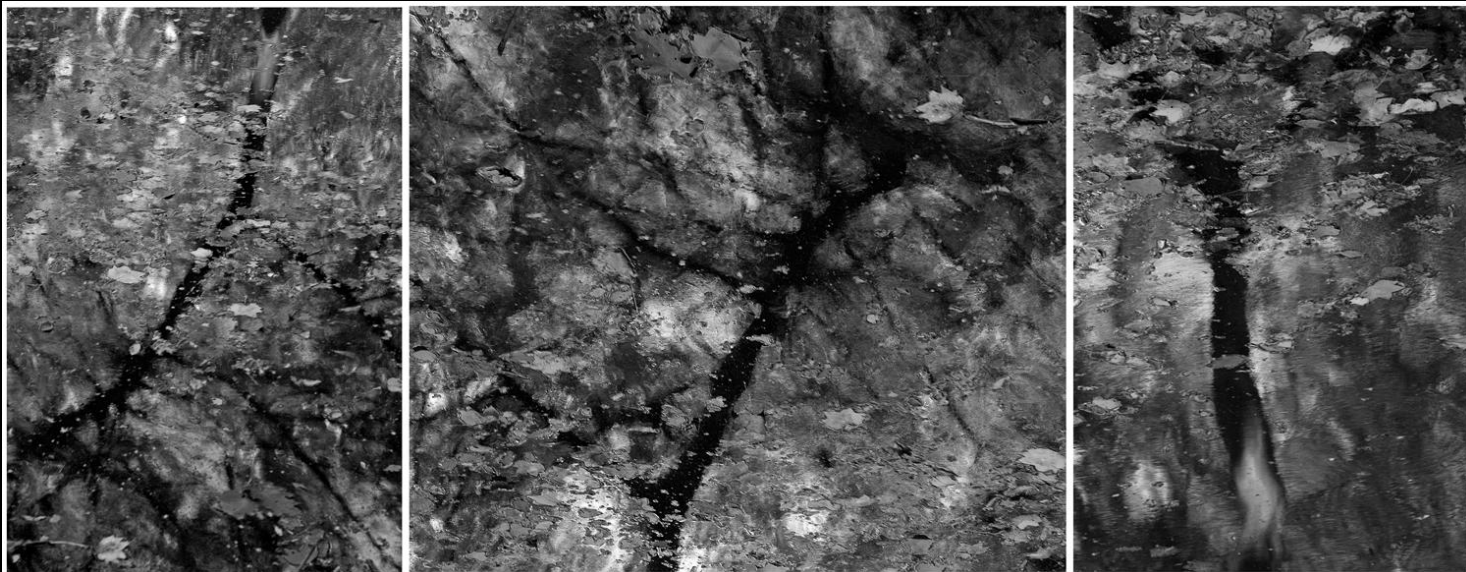
Some images simply must remain in color!





# Black & White vs. Color

Some images simply must remain in color!



# Black & White vs. Color

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Some images work well in color & B&W



But induce  
very different  
moods!



# Black & White vs. Color

---

Some images work well in color & B&W



# Black & White vs. Color

---

Some images work well in color & B&W





# Black & White vs. Color

---

*Some images beg for B&W (color adds essentially nothing)!*



# Black & White vs. Color

---

Some images beg for B&W (color adds essentially nothing)!



# Black & White vs. Color

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Some ideas / tips for finding B&W images

Two useful filters:

Polarizer

Neutral density

→ **Shoot in RAW** ←

- Abstracts
- Architecture
- Close-ups (of everyday things)
- Contrasts
- Figure study / models
- High / low key
- Light / dark spaces
- Patterns
- Portraits
- Selective coloring
- Simplicity (less is more)
- Street photography
- Subtle lighting
- Shape & form
- Textures
- Water / flow (long exposures)

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# Seeing Images

“Good composition is the artist’s way of directing the viewer’s vision in a planned, de-randomized fashion.”

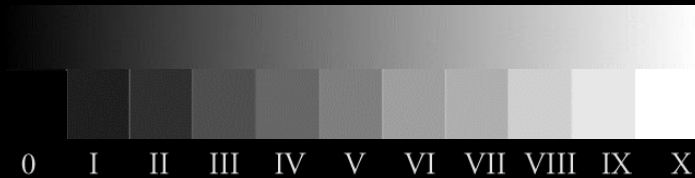
- Bruce Barnbaum

# Composing / Designing

## Basic Elements of Design



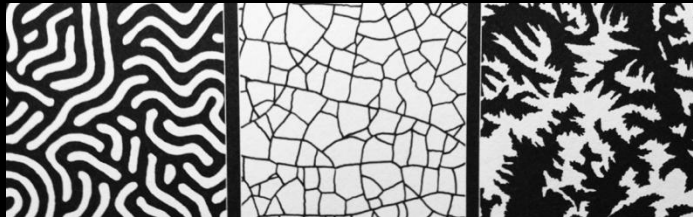
- Form



- Tone



- Texture

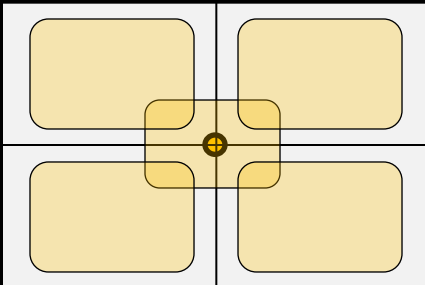


- Pattern

# Form: Single Point

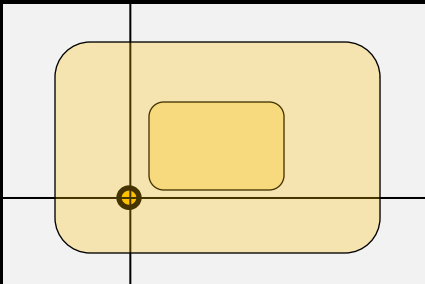
**A single point creates two primitive relationships within frame:**

- Implied forces that are proportional to the distance from edges / corners
- Implied lines that divide frame into horizontal & vertical boxes



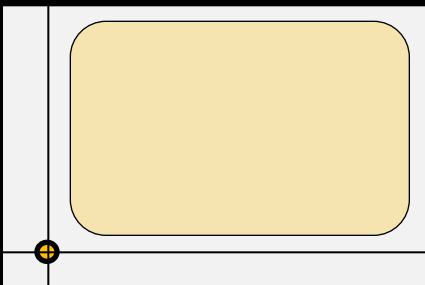
## Center

- Static
- (Usually) not very interesting
- (When used selectively) provides strong, anchored focus



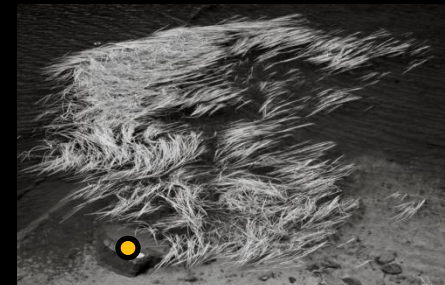
## Slightly off-center

- Adds a dynamic element
- Aesthetics / “feel” depends critically on relative positioning to edges



## Close to edge

- (Obviously) “unusual”;  
Needs strong aesthetic justification
- Best used as “accent” (for aesthetic elements remaining in smaller “box”)



# Form: Single Point - *Example*

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## *Skye, Scotland (2009)*

- *Position and context determines overall mood of the image*
- *Centering anchors shot*
- *Dark silhouette of subject adds contrast*
- *Dark clouds (at top) and dark band of kelp on bottom both anchor and add contrast*
- *Subject's (relative) "smallness" intensifies total immersion (into the "infinite")*
- *Snatches of land (left / right) adds stability*
- *Water in foreground echoes ocean*
- *Layers of rocks and kelp in foreground echo layers of cloud*
- *Vertical space echoes subject's gaze*



# Form: Single Point - *Example*

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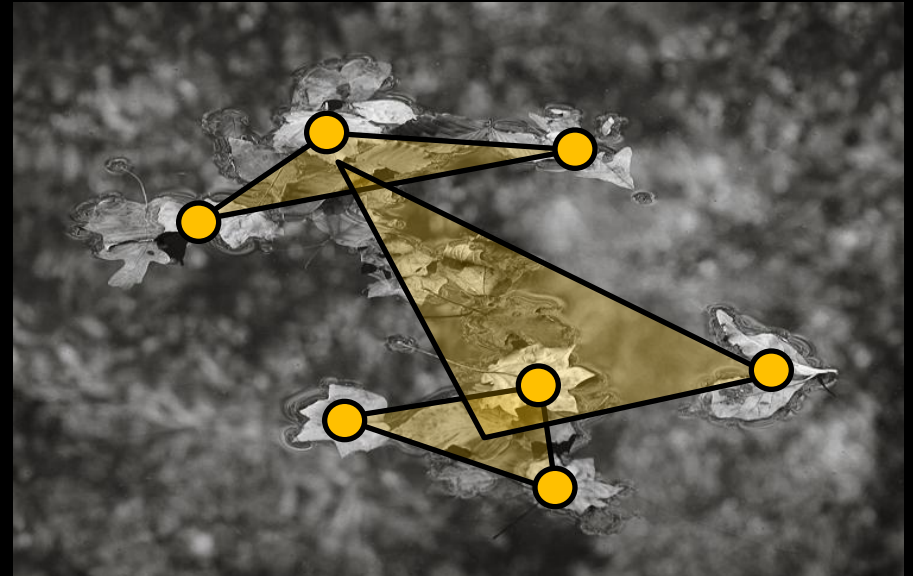
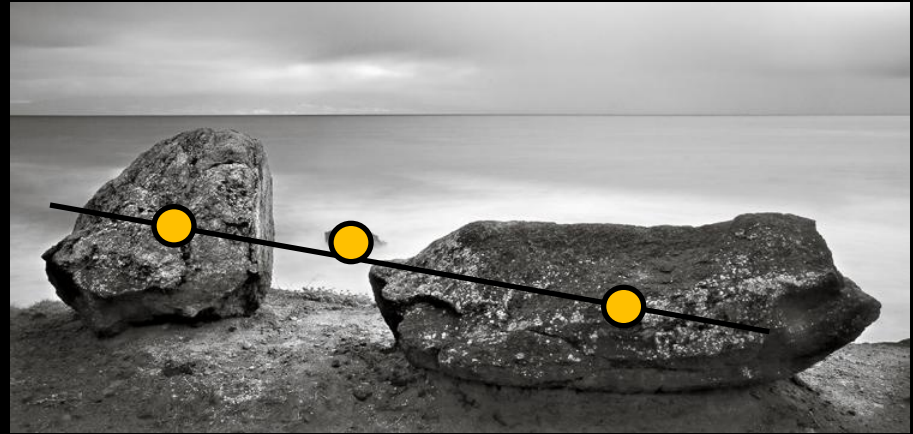
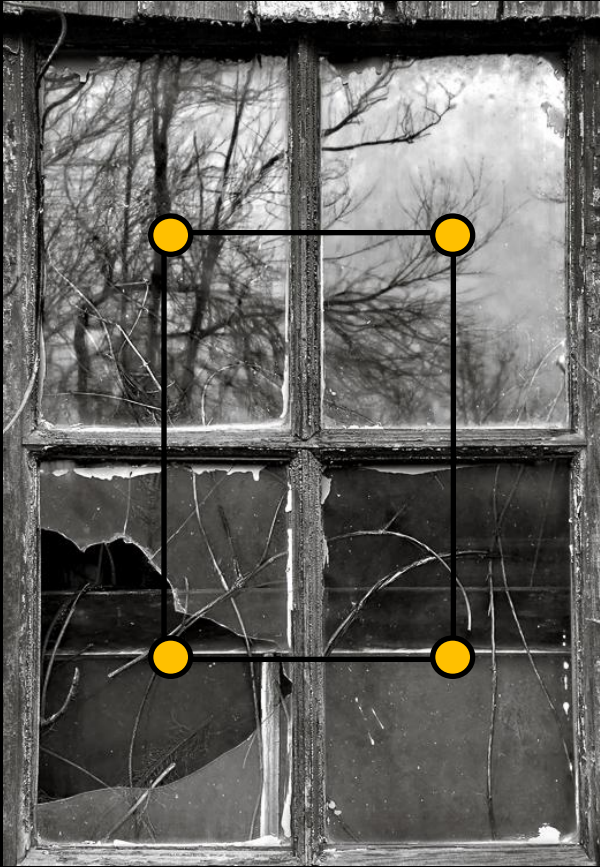
Alternative Crops...





# Form: Multiple Points

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# Form: Lines

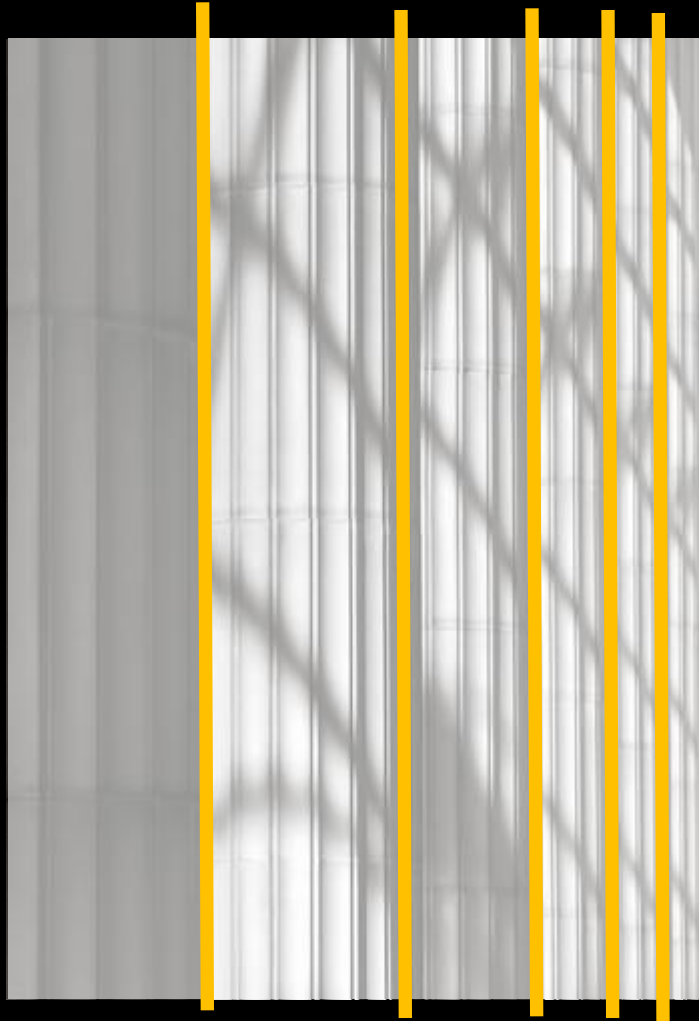
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- Arguably, the most important element
  - Without lines there is no shape;  
Without shape there is no form;  
Without form there is no texture or pattern
- Lines can lead you *away* or *toward* a focus of interest and establish the overall mood
- Different types induce different emotions:
  - Vertical → *power, strength, growth*
  - (Single) horizontal → *rest, stability*
    - High horizon: *heaviness, nearness, earthiness*
    - Centered horizon: *peaceful, quiet, static*
    - Low horizon: *ethereal, expansive, light*
  - (Multiple) horizontal → *drama, rhythm*
  - Diagonal → *action, draw viewer's attention*
  - Thin → *unstable, vulnerable*
  - Thick → *dominating, rigid, stern*
  - Curved → *relaxing, soft, soothing*
  - Jagged → *chaotic, sharp, threatening*

# Form: Lines

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Sometimes the lines are *obvious*

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# Form: Lines

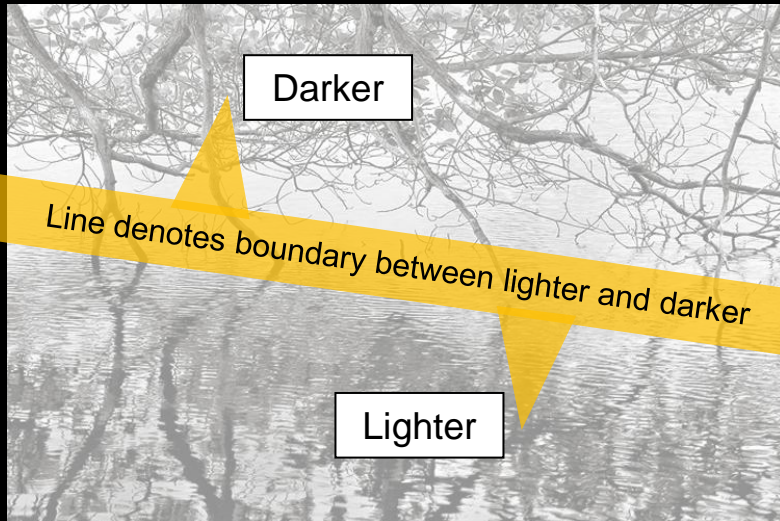
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  - (Single) horizontal → *rest, stability*
    - High horizon: *heaviness, nearness, earthiness*
    - Centered horizon: *peaceful, quiet, static*
    - Low horizon: *ethereal, expansive, light*
  - (Multiple) horizontal → *drama, rhythm*
  - Diagonal → *action, draw viewer's attention*
  - Thin → *unstable, vulnerable*
  - Thick → *dominating, rigid, stern*
  - Curved → *relaxing, soft, soothing*
  - Jagged → *chaotic, sharp, threatening*

Sometimes the lines are *implicit*

# Form: Lines



- Arguably, the most important element

- Without lines there is no shape;  
Without shape there is no form;  
Without form there is no texture or pattern

- Lines can lead you *away* or *toward* a focus of interest and establish the overall mood

- Different types induce different emotions:

- Vertical → *power, strength, growth*
- (Single) horizontal → *rest, stability*
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# Form: *Multiple* Lines

---



# Form: *Multiple* Lines

---





# Form: *Multiple* Lines

---



# Form: *Multiple* Lines

---

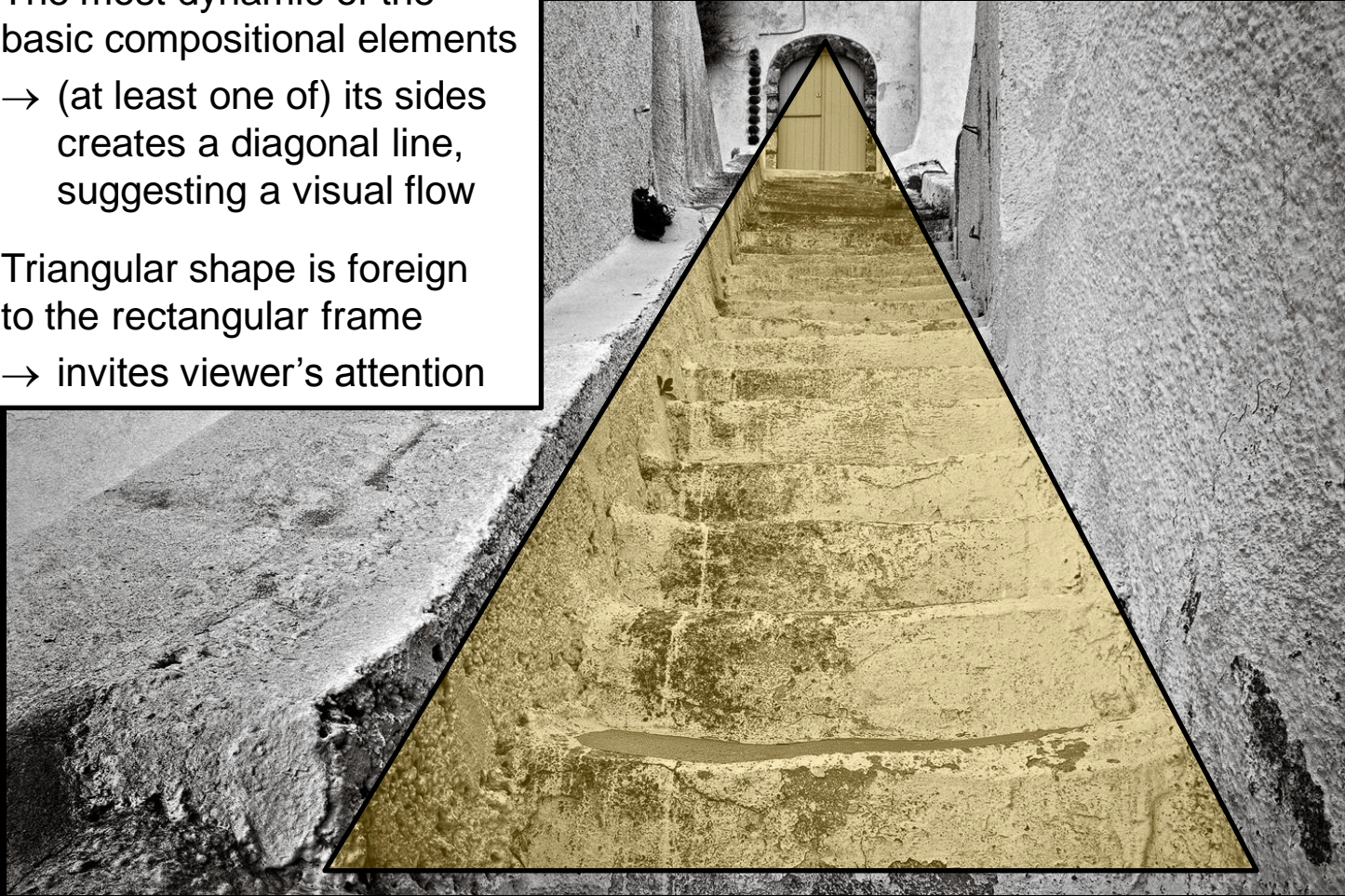




# Form: Shapes - *Triangles*

---

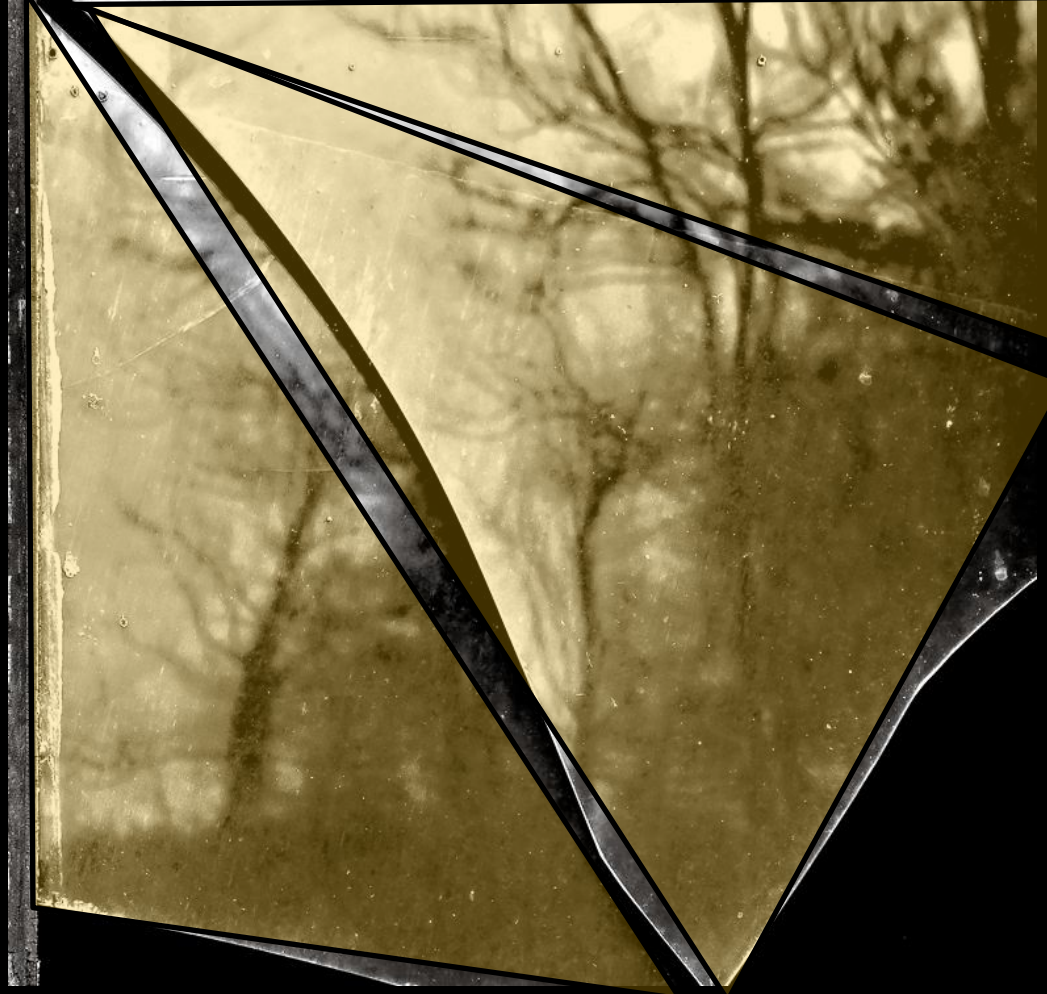
- The most dynamic of the basic compositional elements
  - (at least one of) its sides creates a diagonal line, suggesting a visual flow
- Triangular shape is foreign to the rectangular frame
  - invites viewer's attention





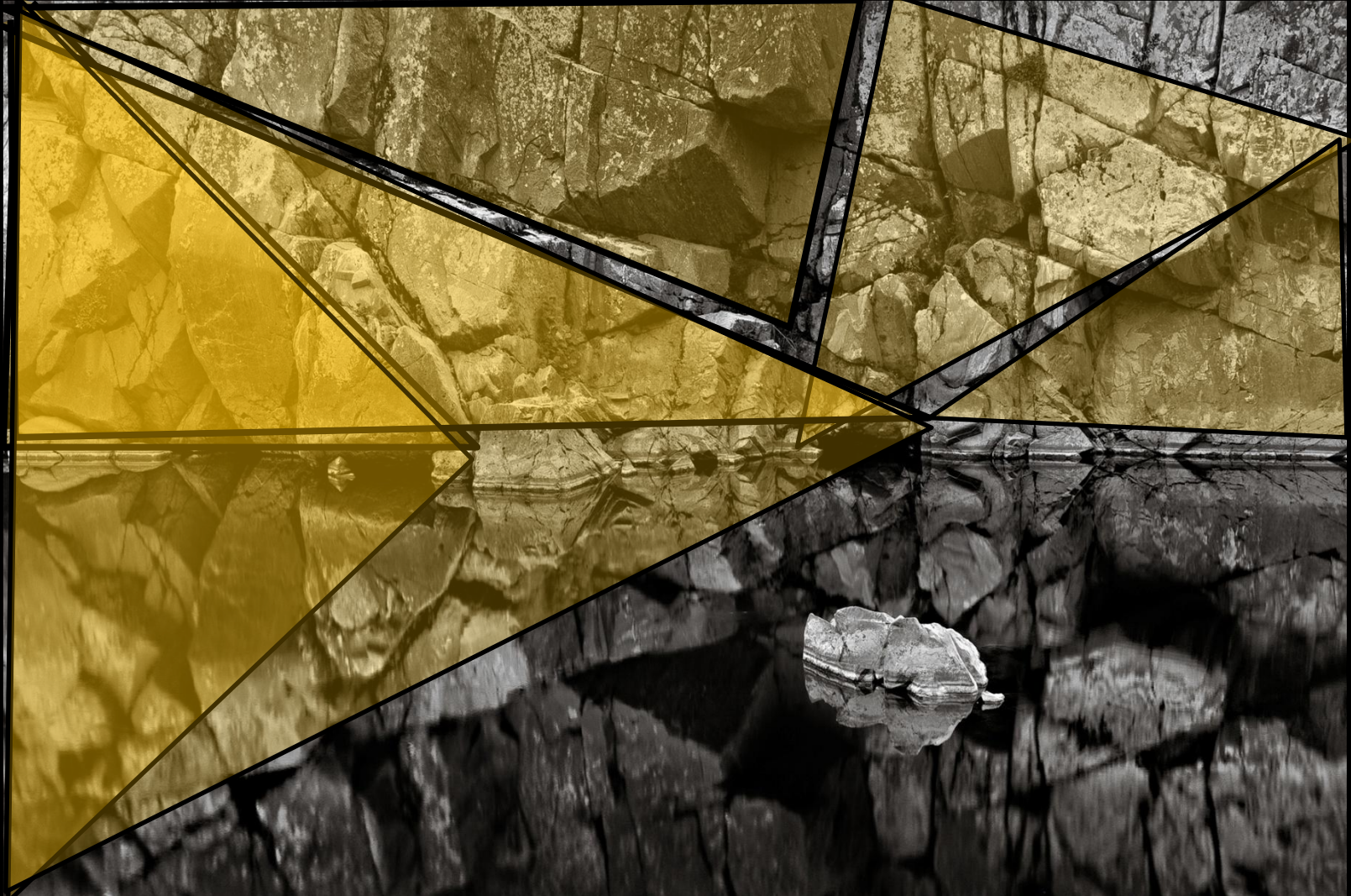
# Form: Shapes - *Triangles*

---



# Form: Shapes - *Triangles*

---





# Form: Shapes – *Squares / Rectangles*

---



# Form: Shapes – *Squares / Rectangles*

---





# Form: Shapes – *Squares* / *Rectangles*

---



# Form: Shapes – *Circles / Ovals*

---





# Form: Shapes – *Circles / Ovals*

---



# Form: Shapes – *Circles / Ovals*

---

- Circular objects typically portray calm, serenity; invite contemplation
- Tend to grab hold of a viewer's attention
- Because circles / ovals are so different from a rectangular frame, they are usually dominant areas



# Form: Shapes – *Combined*

---







# Form: Shapes – *Combined*

---

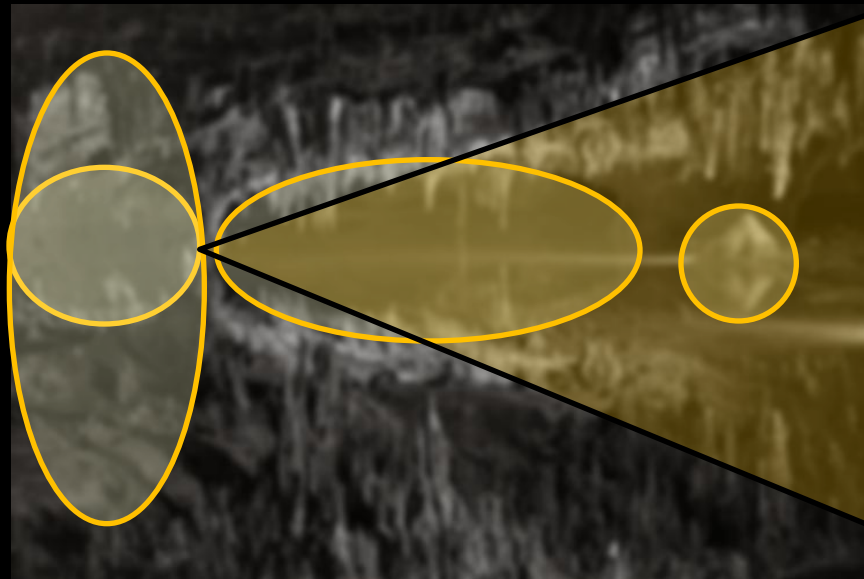




# Form: Shapes – *Combined*

---

Even seemingly very *complex* combinations

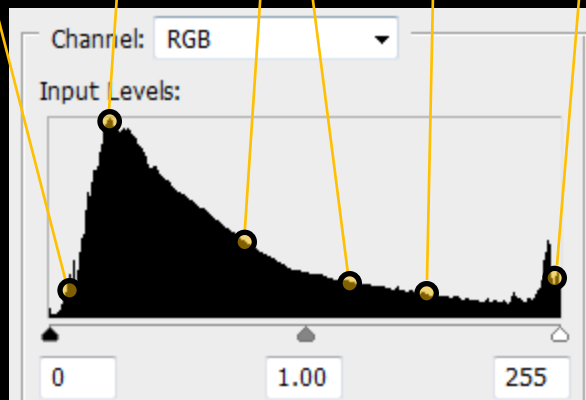


“Complex” only  
in the details

Really...  
Simple shapes +  
texture / pattern

# Basic Elements of Design

## Tone

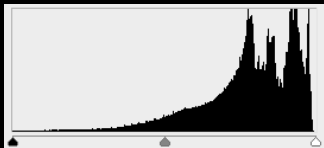


- Arguably the most intangible element
  - May consist of shadings from white → gray → black
  - Marks consist of darks again lights with little gray
  - Useful in adding a 3<sup>rd</sup> dimension to a “flat” B&W image
  - Helps create a “mood” of a composition
    - “High key” images convey lightness, joy
    - “Low key” images convey darkness, mystery
  - Tonal contrasts create boundaries between objects that aid in building aesthetic compositions
- Developing an intuition for the tonal distribution of an image — both before and after a photo has been taken — is critical
- There is no such thing as an *ideal* histogram; histograms merely define the tonal range in a scene and are to be used to *assist* the photographer in conveying the desired mood

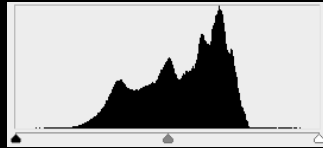


# Basic Tonal Elements

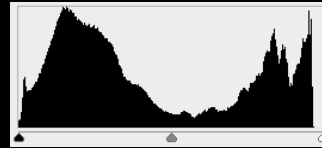
## Brightness & Contrast



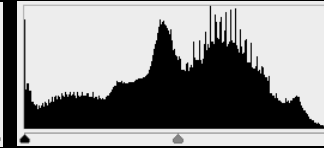
Predominantly light  
("High key")



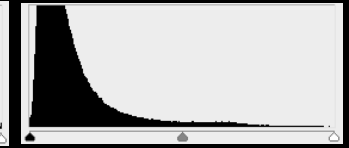
Low contrast



Global Contrast



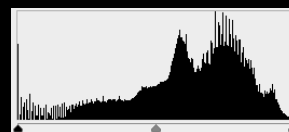
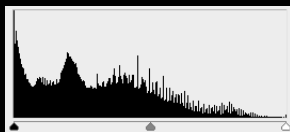
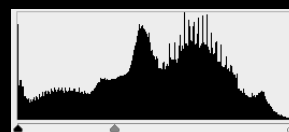
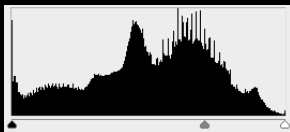
Balanced Range



Predominantly dark  
("Low key")

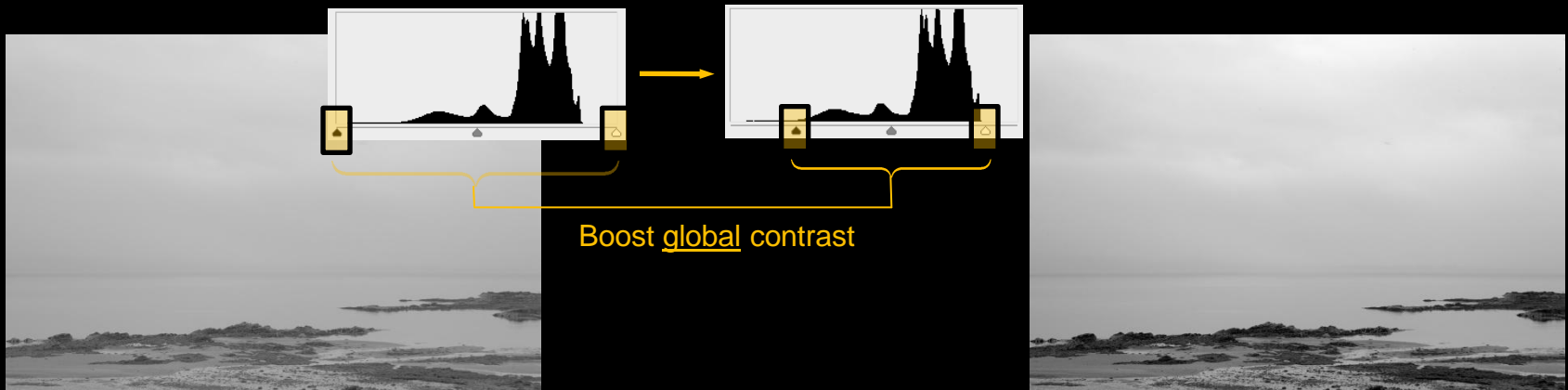
darker

lighter

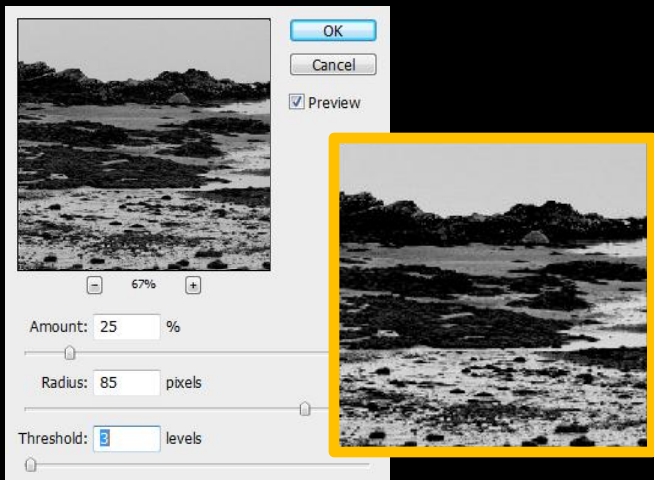


# Basic Tonal Elements

## Local vs. Global Contrast



Boost global contrast more by using *curves*



Enhance local contrast either by selecting part of image (and using curves again), or applying *Unsharp Mask*

# Basic Tonal Elements

---

## Local vs. Global Contrast



Initial B&W conversion



*Global* contrast boost



*Local* contrast boost



# Basic Elements of Design

---

Be mindful of other possible contrasts

*Light / dark*  
*Near / far*  
*Large / small*  
*Sharp / diffuse*  
*One / all*





# Basic Elements of Design

---

Be mindful of other possible contrasts



*Thin / Thick*  
*Broad / narrow*  
*One / many*  
*Plane / volume*  
*Solid / liquid*  
*Linear / circular*

# Basic Elements of Design

---

Be mindful of other possible contrasts

*Sharp / soft*  
*Black / white*  
*Solid / liquid*  
*Flow / motionless*  
*Smooth / rough*



# Basic Elements of Design

---

## Texture



- Refers to the roughness or smoothness of a surface
  - Often over-looked as a visual design element
  - Appearance depends on how close to (or far away from) you are from them
  - Made more visible by using side-lighting
    - creates shadows on surface in proportion to roughness
  - Contrasts between textures creates boundaries between objects (much as tonal contrasts do)
  - Textures may be used as the sole focus of a composition, but we are aware of possible (unintended) distractions
- You can create textures (in otherwise textureless environments)
  - Using a long exposure, pan the camera horizontally across a scene
  - Combine – slightly staggered - multiple exposures of the same scene



# Basic Elements of Design

---

## Texture



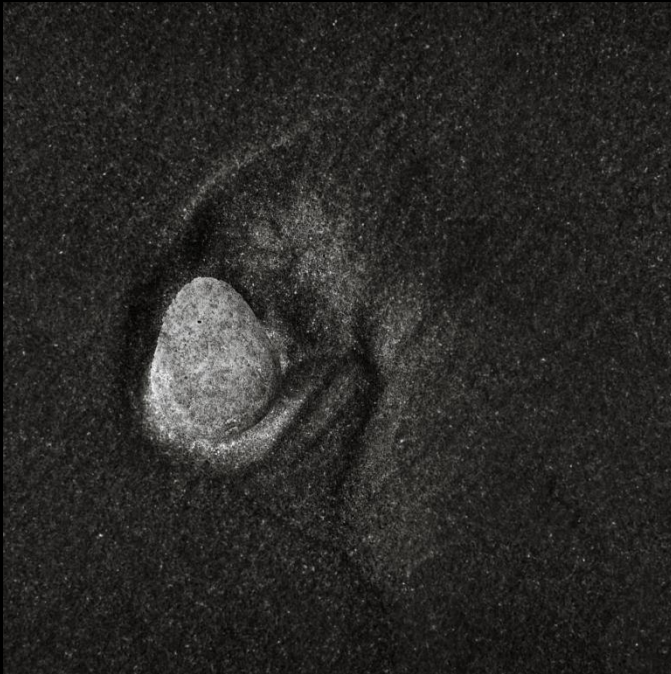
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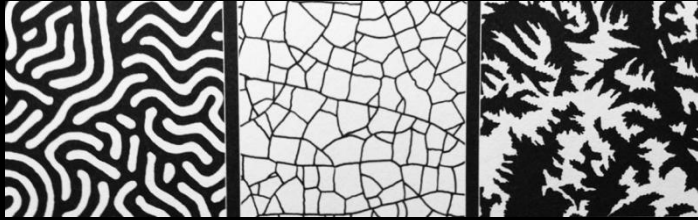


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# Basic Elements of Design

---

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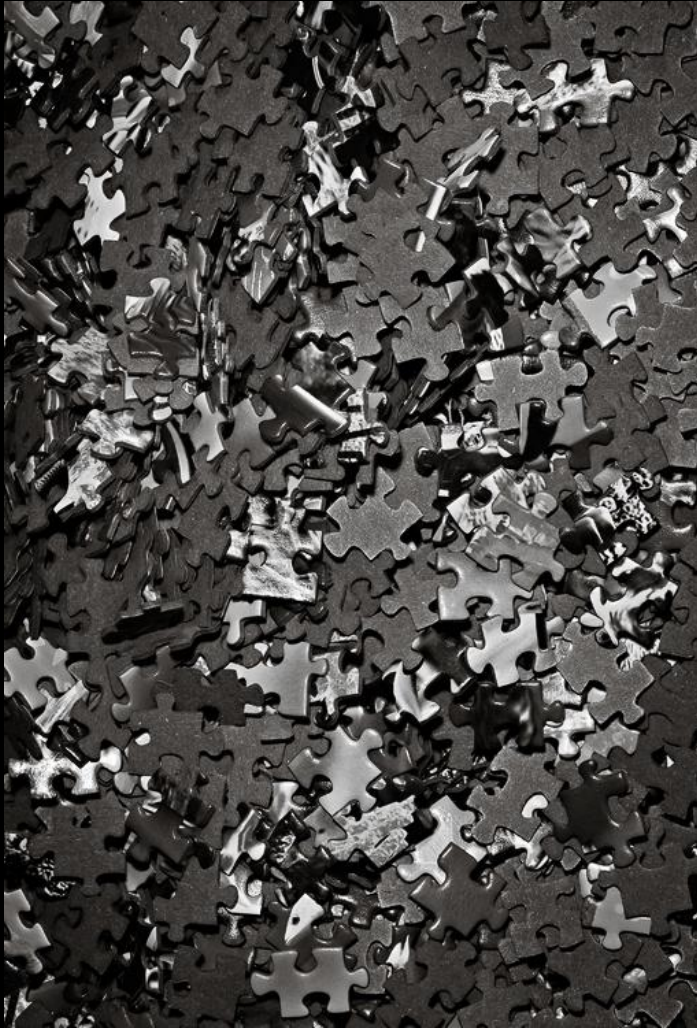


- Fundamental component of nature;  
not just photography  
(I'm speaking here as a physicist ;-)
  - Often over-looked as a visual design element
  - Does not have to be perfect to be useful

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  - Deliberately break the pattern
    - Ex: add a contrasting object (shape, texture) or remove a repeating object(s)
    - Note: the element that breaks the pattern becomes a new “point” in composition (figure ↔ ground)



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---

## Balance / Distribution of Visual Weight

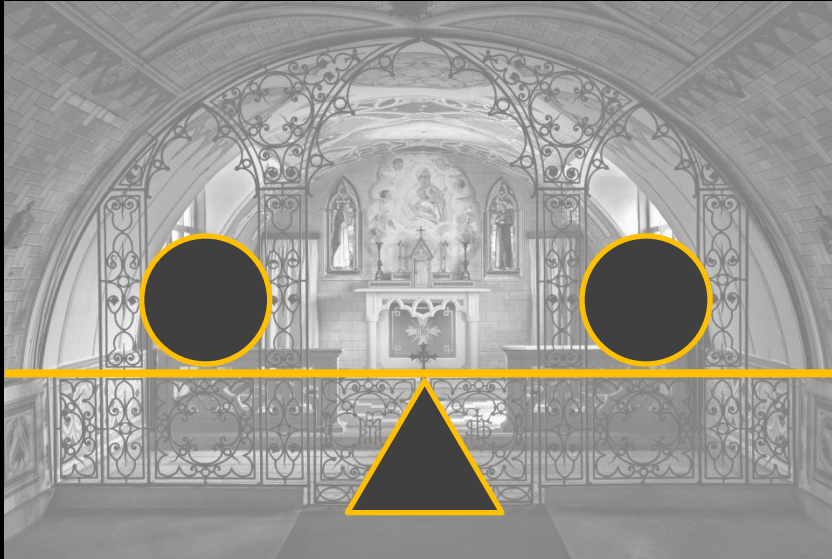


- Balance = resolution of tension;  
of opposing forces (contrasts)
- The eye seeks to balance visible forces
- Balance → aesthetic harmony  
→ Unless disharmony is the objective !



# Basic Elements of Design

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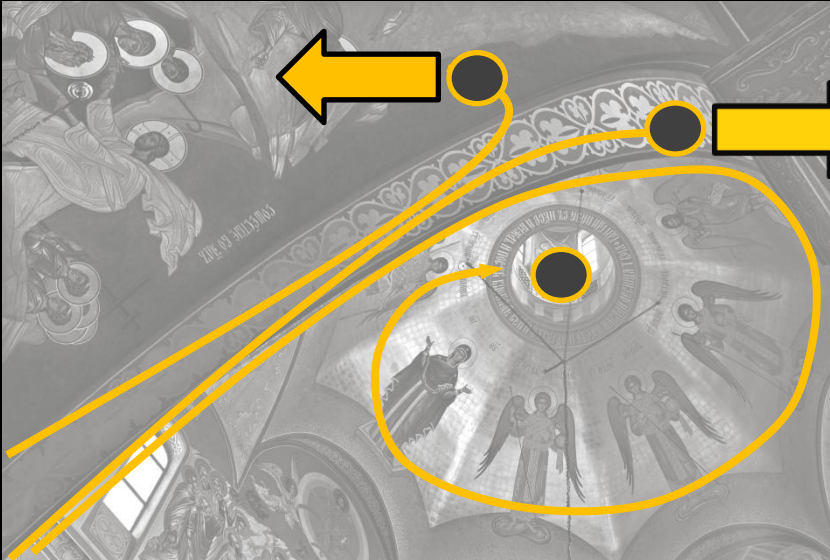


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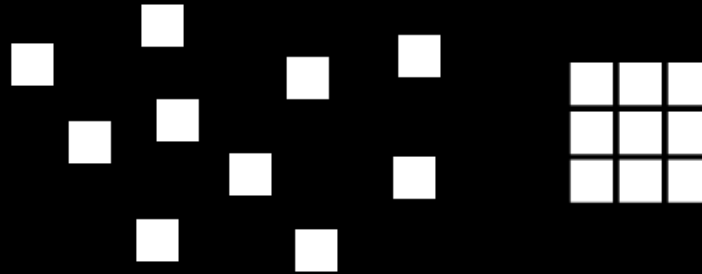
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Founded in Germany ~ 1912 (Max Wertheimer): offers useful principles of *organization*

## Gestalt Laws of Perceptual Organization

1. Proximity: *objects grouped by closeness*

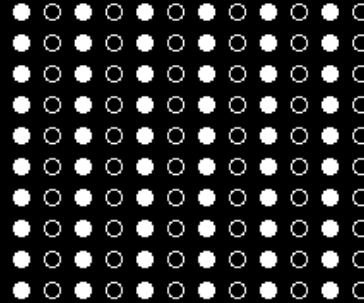


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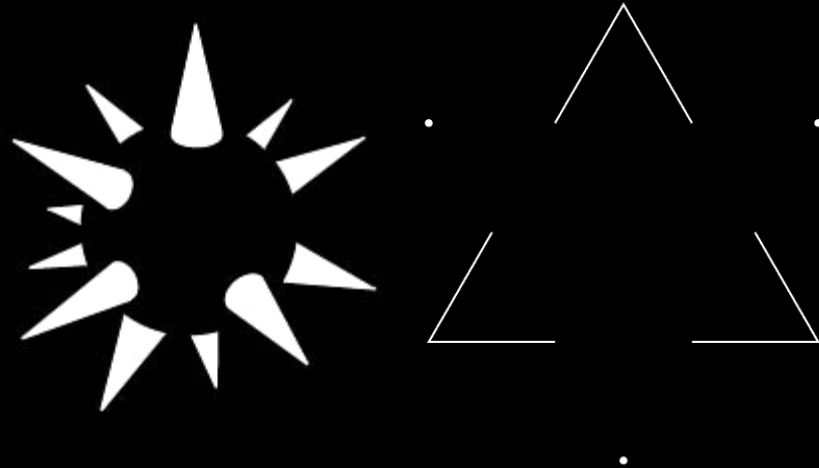


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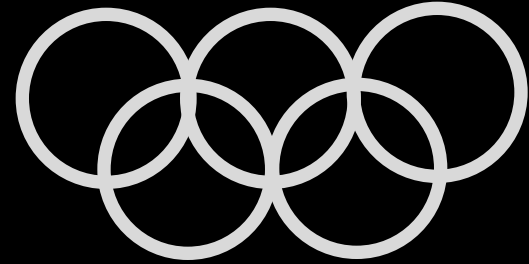
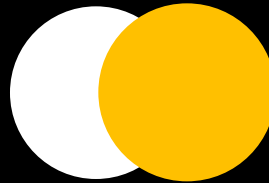


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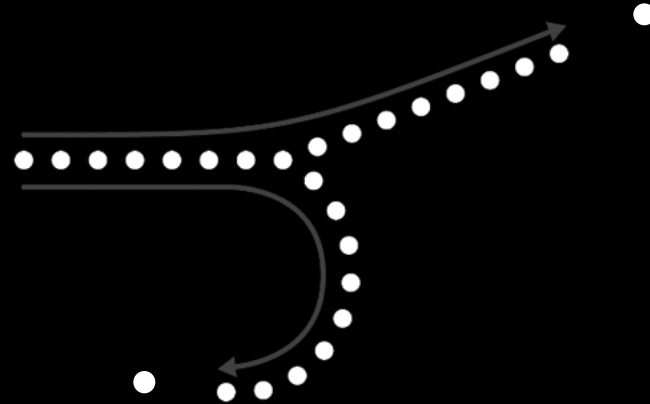


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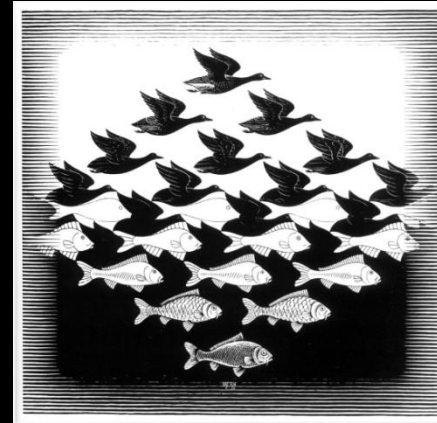


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### 1. Emergence

Parts of image that do not contain sufficient information for explanation suddenly pop out after looking



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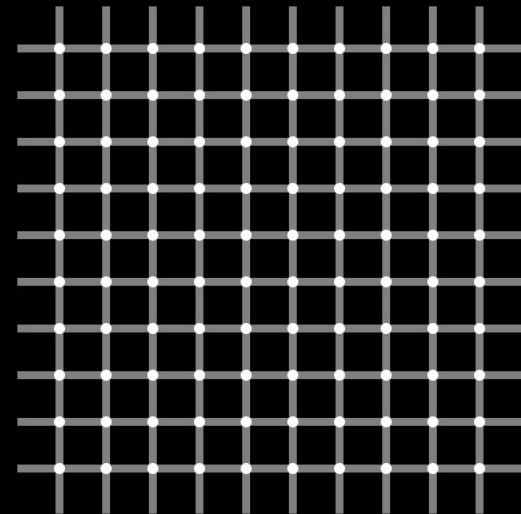
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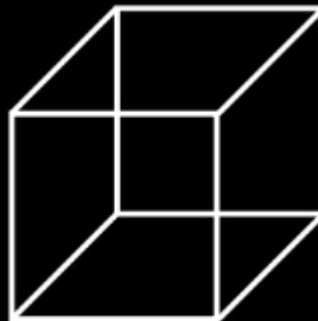
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Sometimes, when insufficient depth clues, objects invert spontaneously



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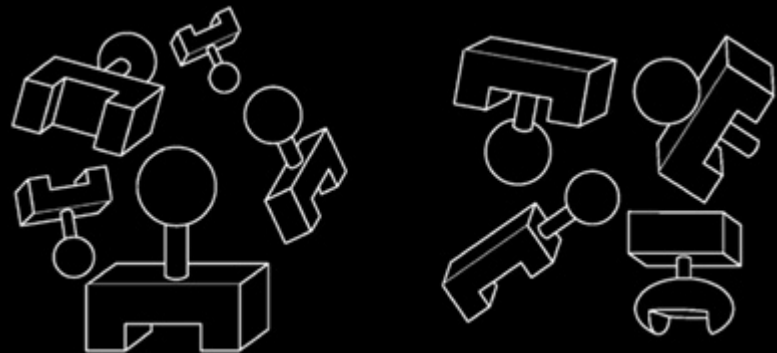
The mind fills in shapes / areas due to inadequate visual input

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### 4. Invariance

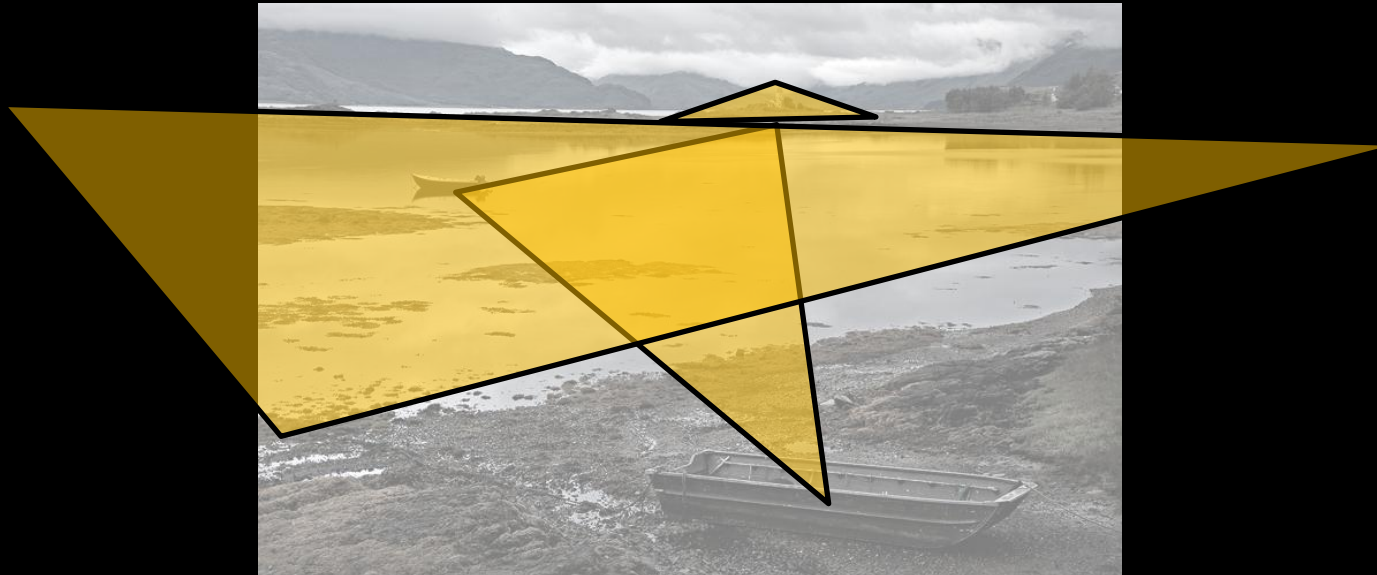
Recognition takes places regardless of orientation, rotation, aspect, scale, and other factors





# Gestalt Theory: *a few examples*

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# Gestalt Theory: *a few examples*

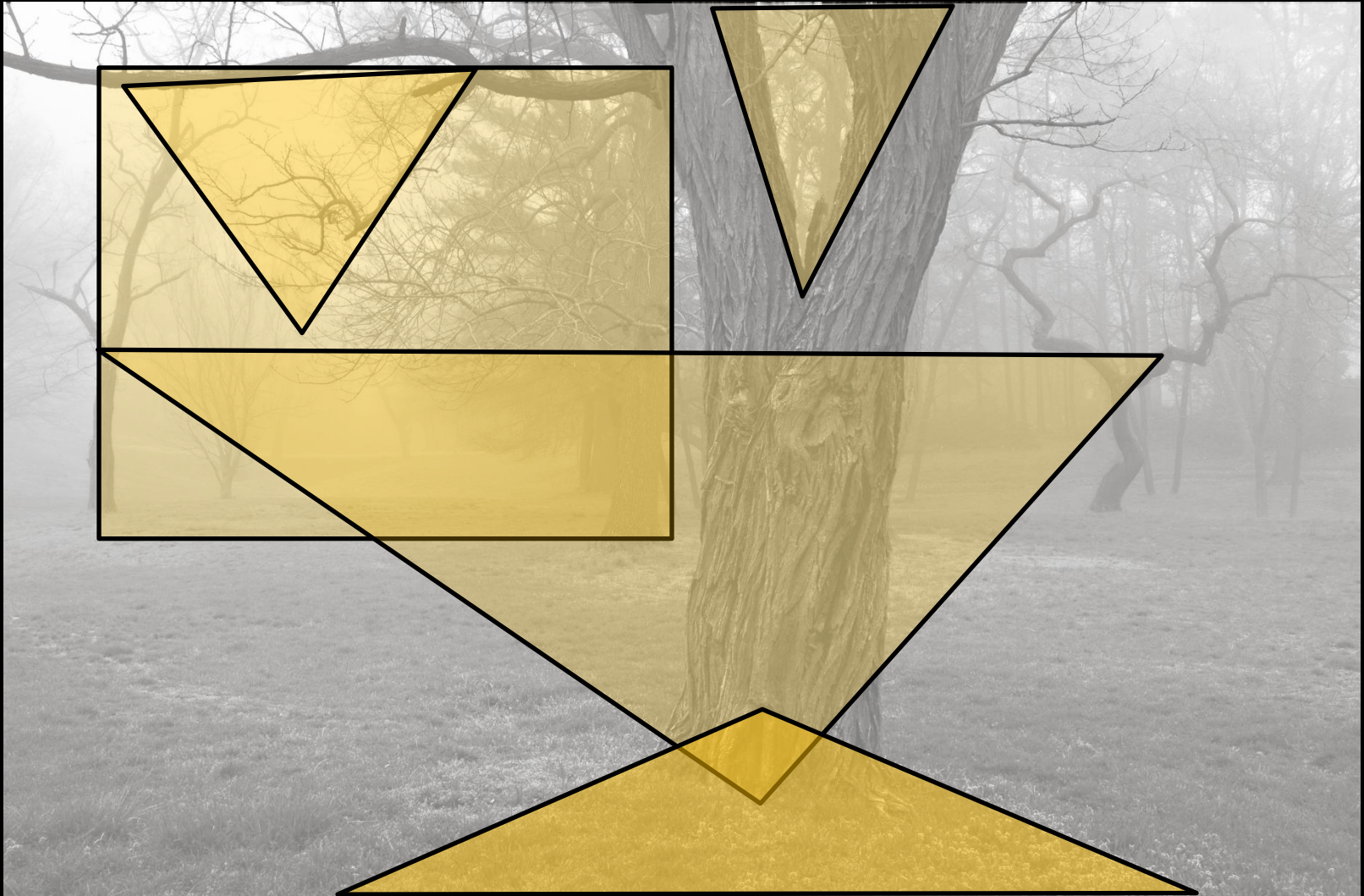
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# Gestalt Theory: *a few examples*

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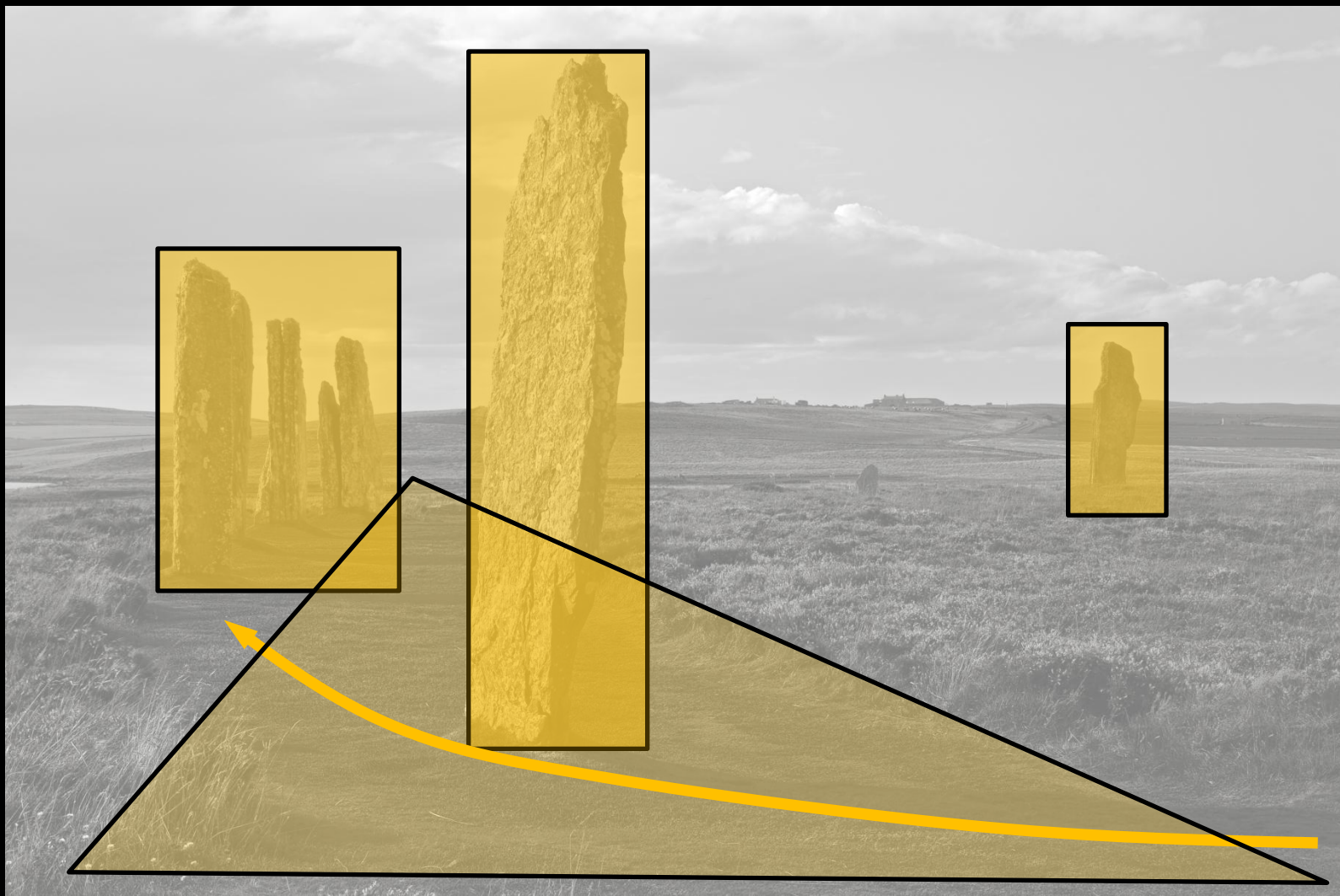


# Gestalt Theory: *a few examples*

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# Composing / Designing

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Fifth Essential Element: *Light*



“I almost never set out to photograph a landscape,  
nor do I think of my camera as a means of recording  
a mountain or an animal unless I absolutely need a 'record shot'.  
My first thought is always of light. “

— GALEN ROWELL, *Photographer* (1940 - 2002)

# Composing / Designing

---

## Fifth Essential Element: *Light*



- Photography: “φωτος” (photos = light) + “γραφειν” (graphos = painting) → *“painting with light”*
- A point-and-shooter asks: *“How’s the weather?”*  
A photographer always asks: *“How’s the light?”*
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# Composing / Designing

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- **Hard / soft / direct / indirect / warm / cool / front / back**  
*“There is no such thing as ‘bad’ light.”* – Jay Maisel
- **Light gives form by creating contrast**  
→ **Use strong shadows in hard light as “objects”**  
→ **Use directional lighting to enhance textures**



# Composing / Designing

---

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- Regardless of all other elements of a photograph, often even including what the photograph is about, it is the quality of the light that determines its mood
- Hard / soft / direct / indirect / warm / cool / front / back  
*“There is no such thing as ‘bad’ light.”* – Jay Maisel
- Light gives form by creating contrast  
→ Use strong shadows in hard light as “objects”  
→ Use directional lighting to enhance textures
- Explore different “takes” on the same scene bathed in different kinds of light
- Often the only difference between so-so image and memorable photograph is the quality of light

# Outline of Class

---

## Topics

- Who is this guy, and why should I listen to him?
  - And why you *ought not* listen to him
- Photography in six easy steps ;-)
- Fine-art photography
  - A closer look
- Color → black & white :: Part 1 - *examples*
  - Some images are best in color; some beg for B&W
- Seeing images
  - Basic elements of design (*form, tone, texture, pattern + light*)
- **Camera vs. eye :: *similarities & differences***
  - What photographers need to keep in mind
- Color → black & white :: Part 2 - *doing it for yourself*
  - Conversion techniques / programs / plug-ins
- Moving on to the next level
- Concluding thoughts :: references
- Extra :: portfolio samples / East vs. West in art / “complexity”

# Camera vs. Eye

“The difference in “seeing” between the eye and the lens should make it obvious that a photographer who merely points his camera at an appealing subject and expects to get an appealing picture in return, may be headed for a disappointment.” - Andreas Feininger

- Both have a *lens*, an *aperture*, an *image plane*, and *light sensors*
- A camera (typically) has a mechanical shutter; human vision is sampled through the optic nerve
- Human eye has very narrow angle of sharp vision ( $\sim 3$  radial deg)



What the *camera* sees



What the *eye* sees

# Camera vs. Eye

“The difference in "seeing" between the eye and the lens should make it obvious that a photographer who merely points his camera at an appealing subject and expects to get an appealing picture in return, may be headed for a disappointment. “ - Andreas Feininger

- Both have a *lens*, an *aperture*, an *image plane*, and *light sensors*
- A camera (typically) has a mechanical shutter; human vision is sampled through the optic nerve
- Human eye has very narrow angle of sharp vision ( $\sim 3$  radial deg)
- Eye scans images in small segments / takes in *very wide view* segments; Focus darts up / down / left / right according to what grabs attention; Most fine details remain fuzzy / brain fills in unfocused details





# Camera vs. Eye

---

“The difference in "seeing" between the eye and the lens should make it obvious that a photographer who merely points his camera at an appealing subject and expects to get an appealing picture in return, may be headed for a disappointment. “ - Andreas Feininger

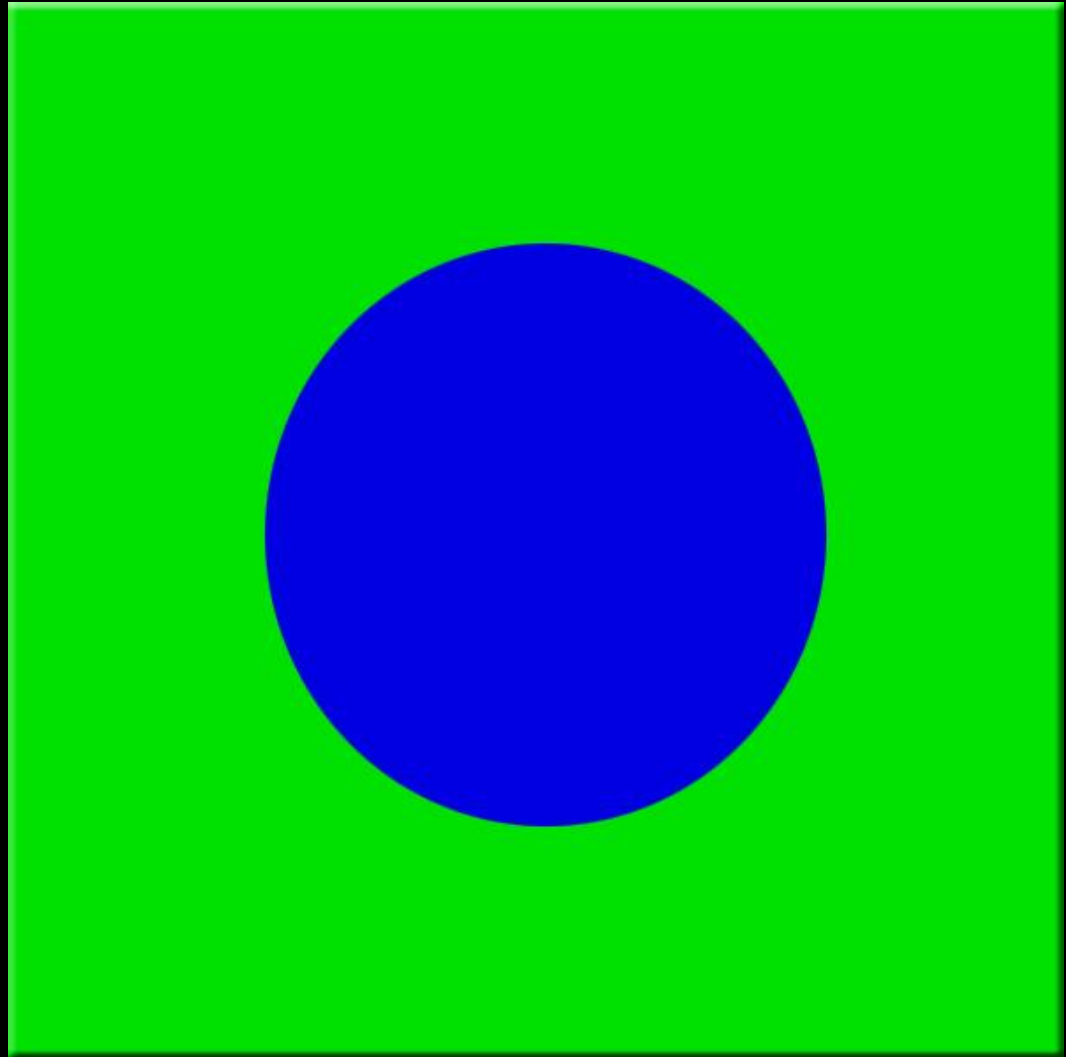
- Both have a *lens*, an *aperture*, an *image plane*, and *light sensors*
- A camera (typically) has a mechanical shutter;  
human vision is sampled through the optic nerve
- Human eye has very narrow angle of sharp vision (~ 3 radial deg)
- Eye scans images in small segments / takes in *very* wide view segments;  
Focus darts up / down / left / right according to what grabs attention;  
Most fine details remain fuzzy / brain fills in unfocused details;
- **Light:** eye/brain records *subjectively*; camera records *objectively*
- **Focus:** eye – muscles adaptively *change the shape* of the lens;  
camera – lens moves closer/further from the film to focus
- **Sensitivity:** film/CCD *uniformly* sensitive to light; retina is not
- **Dynamic range:** digital camera ~ 5-10 (14 max) f-stops; eye ~ 20 f-stops !

# Camera vs. Eye

The *eye* “sees” certain colors as brighter / darker than others

Which is darker...

the green patch  
or the  
blue patch?



# Camera vs. Eye

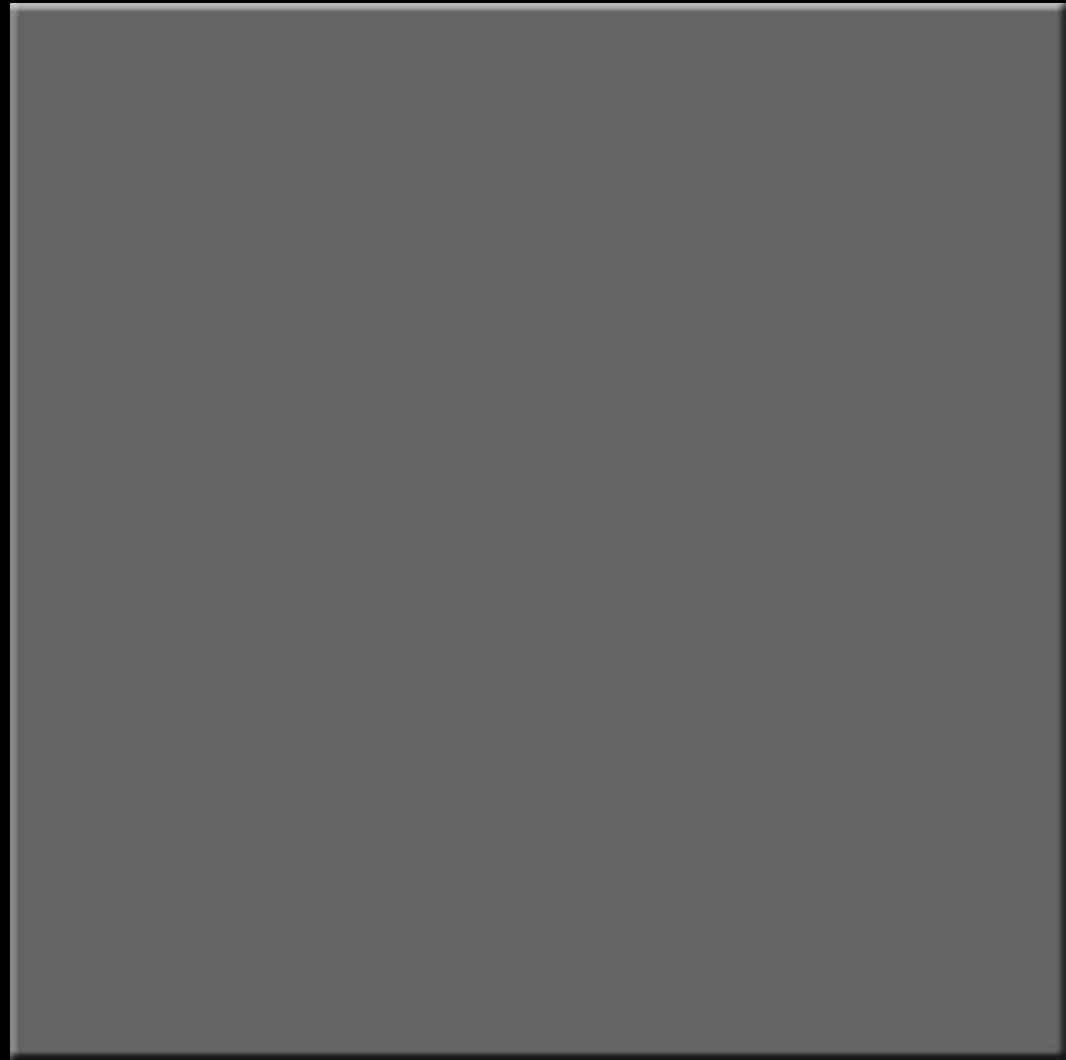
---

The *eye* “sees” certain colors as brighter / darker than others

Which is darker...

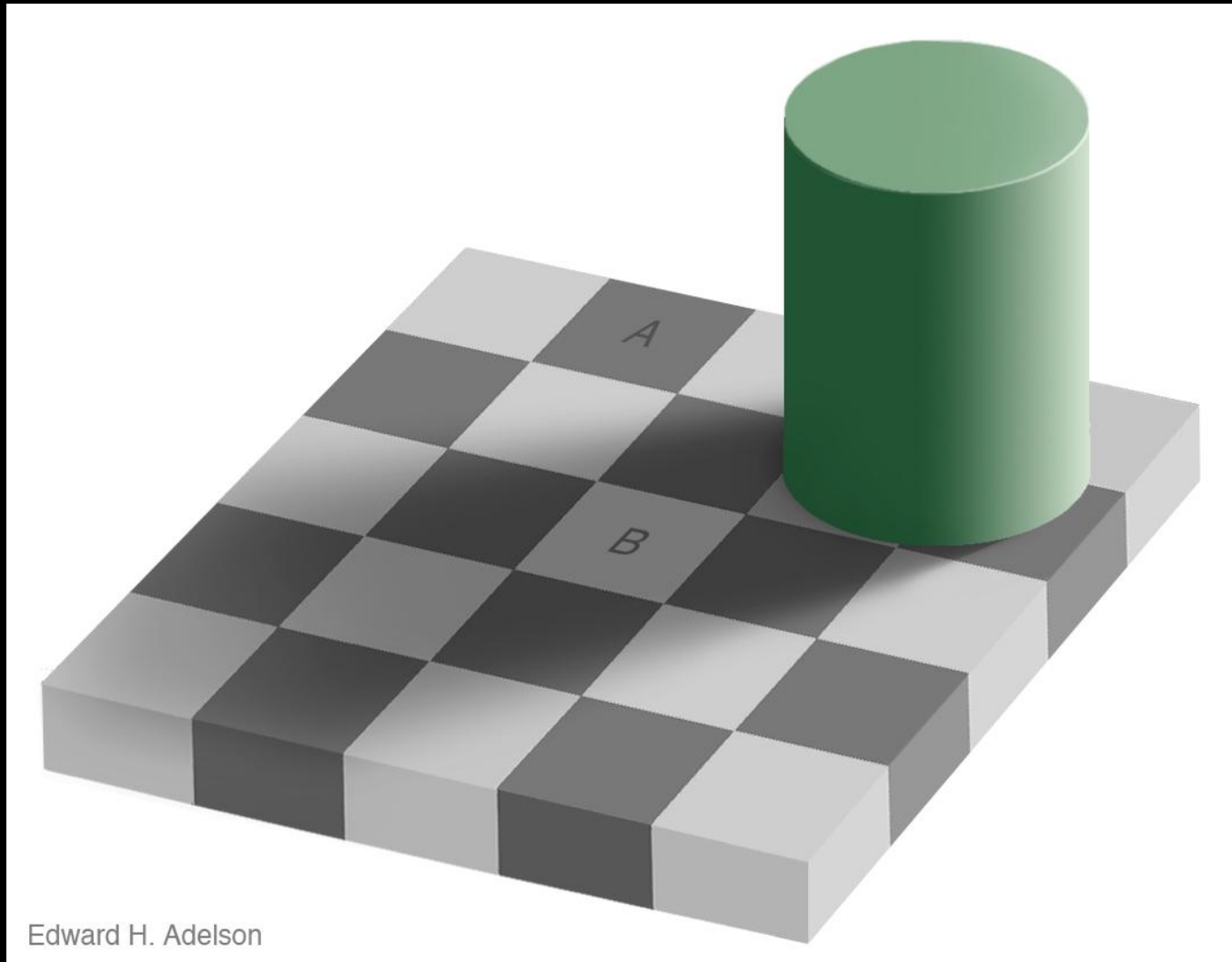
the green patch  
or the  
blue patch?

Desaturation  
(i.e. pure luminance)  
shows they  
*are equally bright !*



# Camera vs. Eye

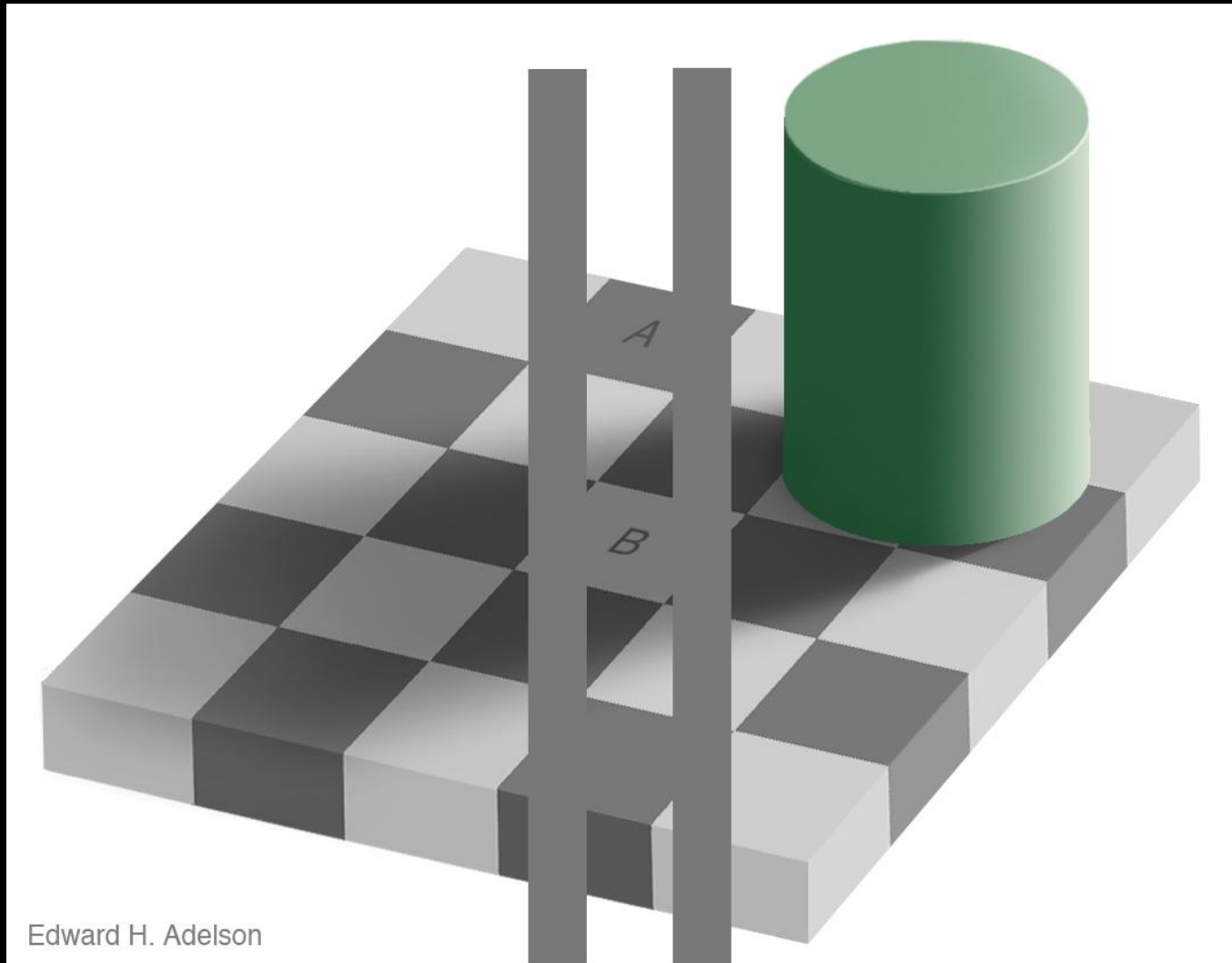
The brain “sees” (interprets) shades of grey locally





# Camera vs. Eye

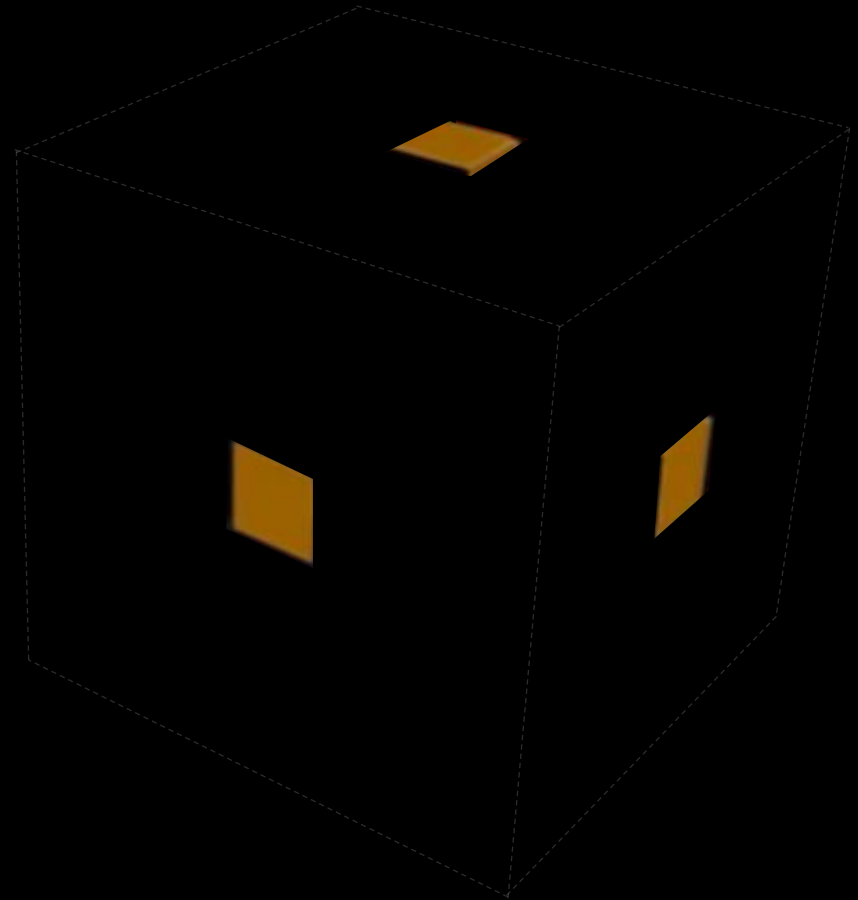
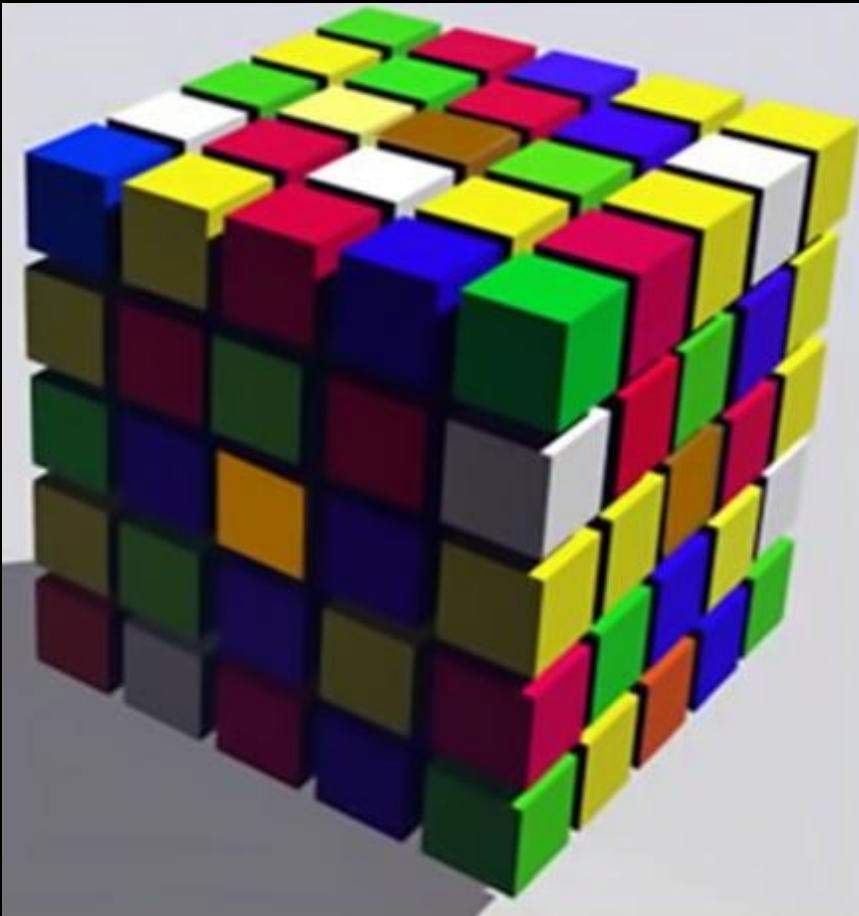
The brain “sees” (interprets) shades of grey locally



Edward H. Adelson

# Camera vs. Eye

The brain “sees” (interprets) color locally



# Camera vs. Eye

**Dynamic Range** = ratio between the max and min measurable light intensities



Straight out of camera

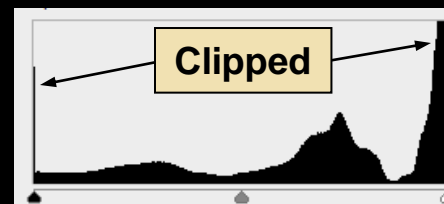
Medium	Range (f-stops)
Nature	24
Human eye	20 +/-
Color slide film	5-1/2
JPEG image	8-1/2
Color negative film	10
RAW image	12
B&W negative film	14
HDR image	16
Monitor (consumer)	6-1/2
Print paper	8
Monitor (pro grade)	10

# Camera vs. Eye

**Dynamic Range** = ratio between the max and min measurable light intensities



Straight out of camera



Medium	Range (f-stops)
Nature	24
Human eye	20 +/-
Color slide film	5-1/2
JPEG image	8-1/2
Color negative film	10
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B&W negative film	14
HDR image	16
Monitor (consumer)	6-1/2
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Monitor (pro grade)	10



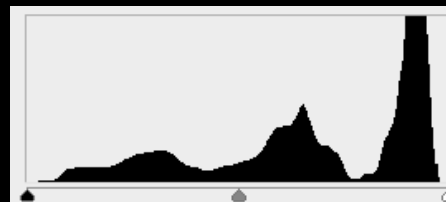
# Camera vs. Eye

**Dynamic Range** = ratio between the max and min measurable light intensities



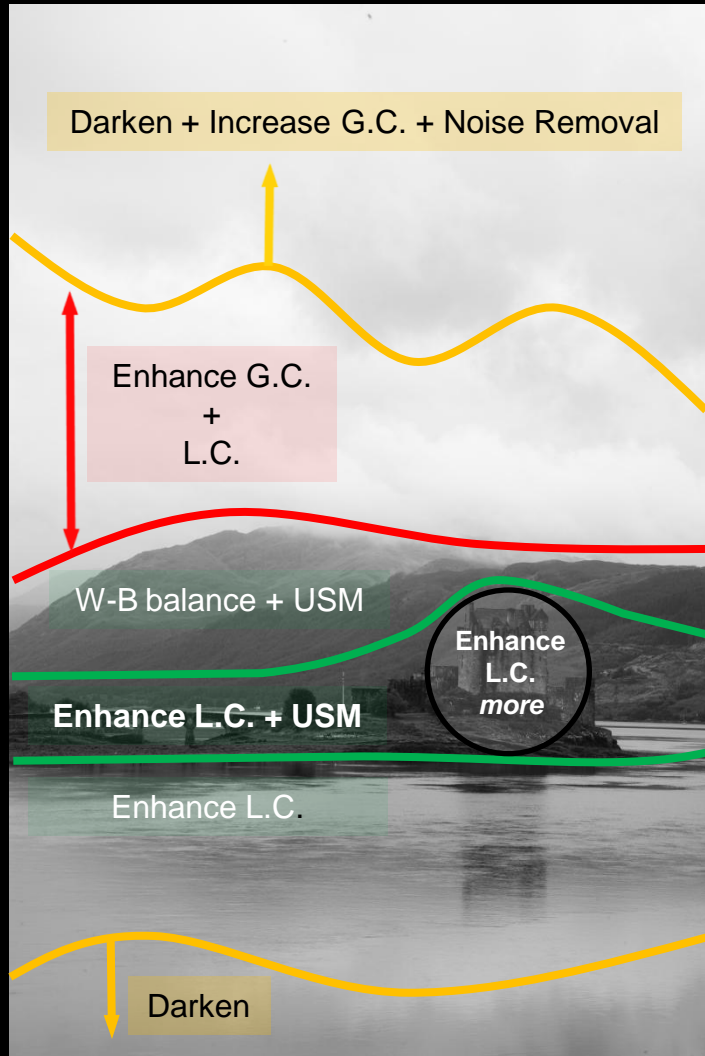
Corrected in Raw Converter

Medium	Range (f-stops)
Nature	24
Human eye	20 +/-
Color slide film	5-1/2
JPEG image	8-1/2
Color negative film	10
RAW image	12
B&W negative film	14
HDR image	16
Monitor (consumer)	6-1/2
Print paper	8
Monitor (pro grade)	10



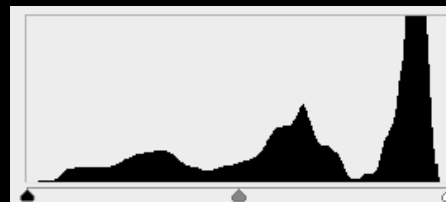
# Camera vs. Eye

**Dynamic Range** = ratio between the max and min measurable light intensities



Anticipated **LOCAL** manipulations

Medium	Range (f-stops)
Nature	24
Human eye	20 +/-
Color slide film	5-1/2
JPEG image	8-1/2
Color negative film	10
RAW image	12
B&W negative film	14
HDR image	16
Monitor (consumer)	6-1/2
Print paper	8
Monitor (pro grade)	10



# Camera vs. Eye

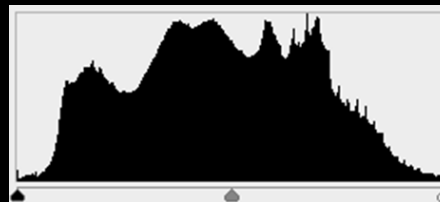
**Dynamic Range** = ratio between the max and min measurable light intensities



Final color → B&W conversion

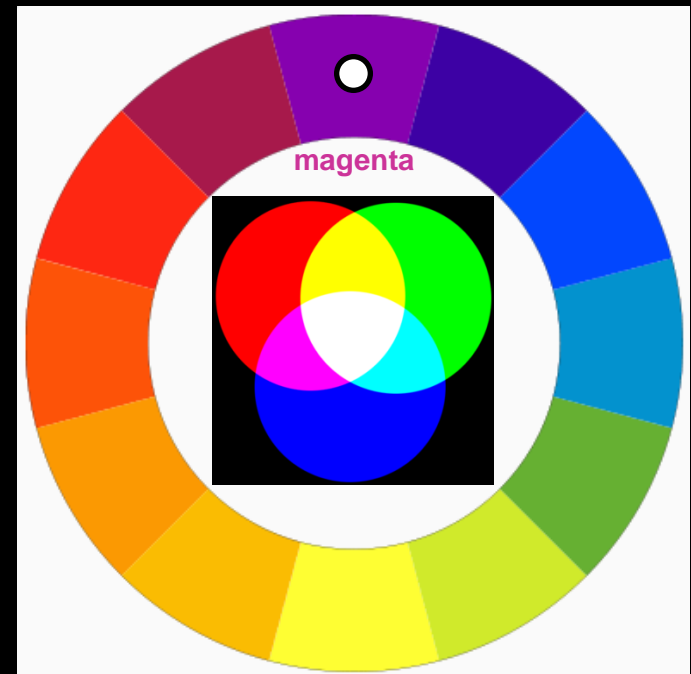
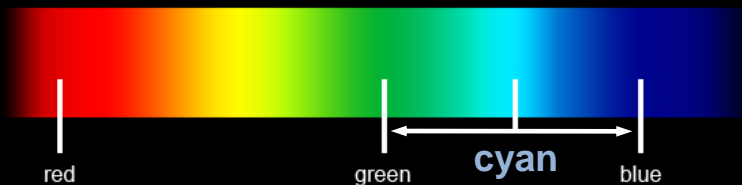
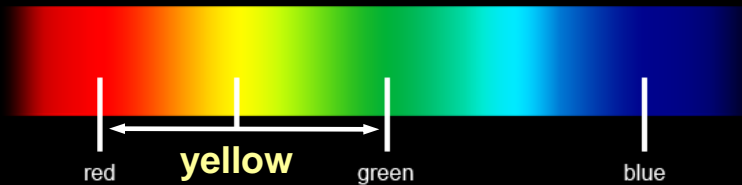
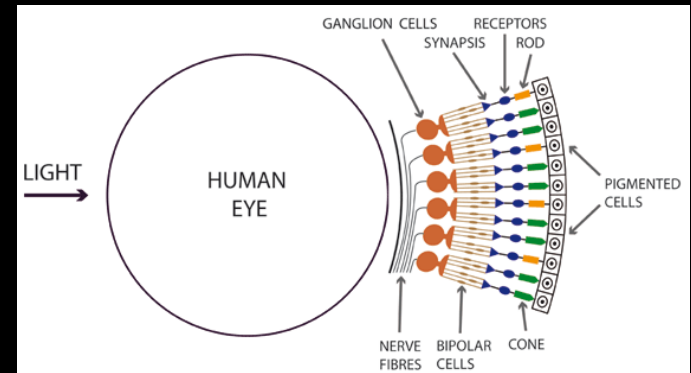
Medium	Range (f-stops)
Nature	24
Human eye	20 +/-
Color slide film	5-1/2
JPEG image	8-1/2
Color negative film	10
RAW image	12
B&W negative film	14
HDR image	16
Monitor (consumer)	6-1/2
Print paper	8
Monitor (pro grade)	10

RAW  
processing  
can help  
approximate  
human  
vision



# Color → Black & White

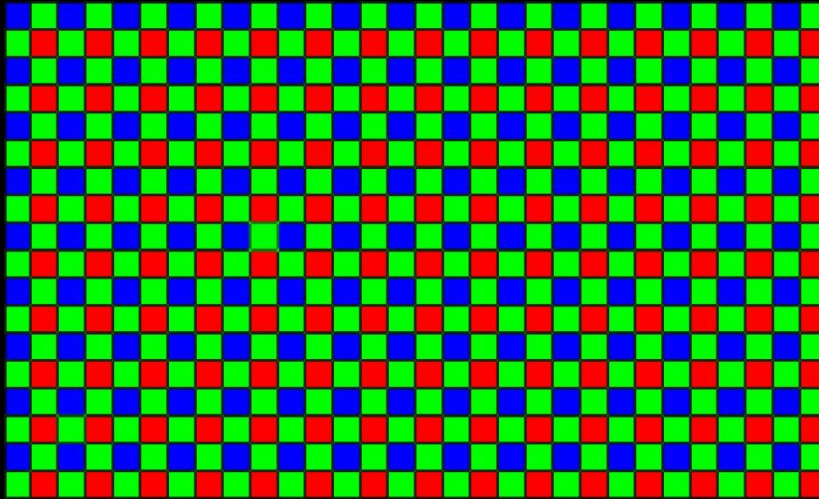
Primary colors – **R G B**  
arise not from physics,  
but from how our eyes work!



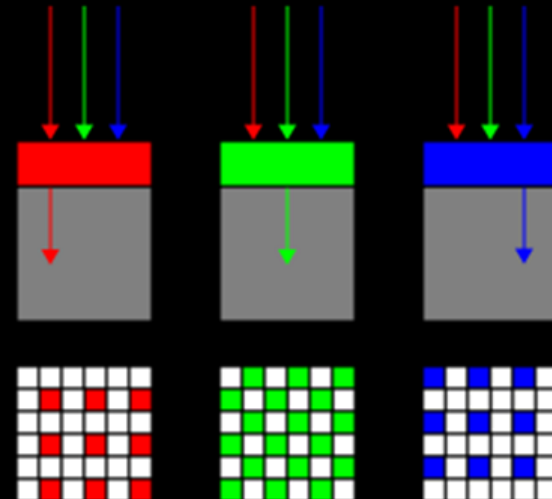
Question: *Where does magenta come from?*



# Color → Black & White



Color Filter Array (CFA) / Bayer pattern  
(named after its inventor, Bryce E. Bayer of *Eastman Kodak*)



$R_{i-1,j+1}$	$G_{i,j+1}$	$R_{i+1,j+1}$
$G_{i-1,j}$	$B_{i,j}$	$G_{i+1,j}$
$R_{i-1,j-1}$	$G_{i,j-1}$	$R_{i+1,j-1}$

$$\begin{cases} G_{i,j} = (G_{i,j+1} + G_{i-1,j} + G_{i+1,j} + G_{i,j-1}) / 4 \\ R_{i,j} = (R_{i-1,j+1} + R_{i+1,j+1} + R_{i-1,j-1} + R_{i+1,j-1}) / 4 \\ B_{i,j} = B_{i,j} \end{cases}$$

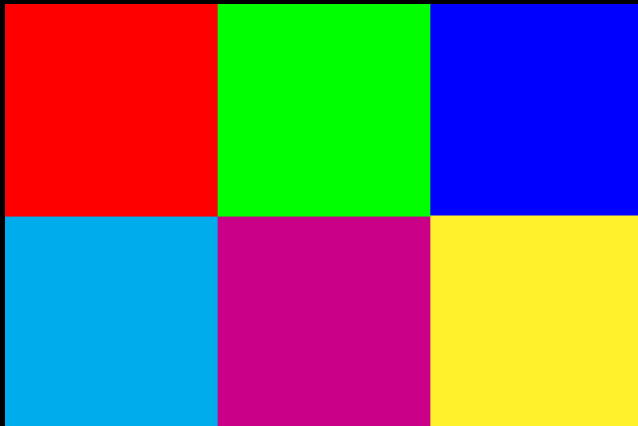
# Outline of Class

---

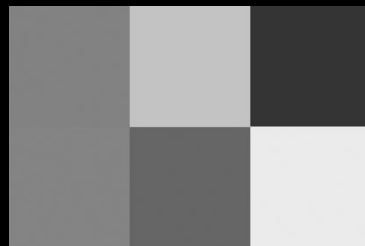
## Topics

- Who is this guy, and why should I listen to him?
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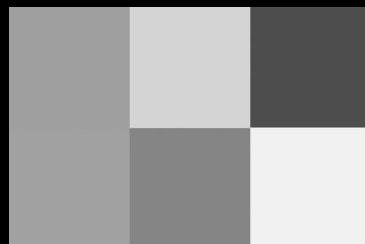
# Color → B&W *Channel Conversion*



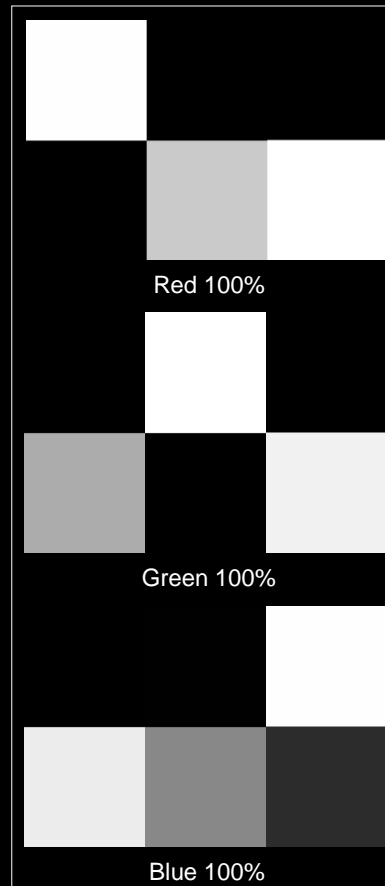
"R / G / B — Cyan / Magenta / Yellow"



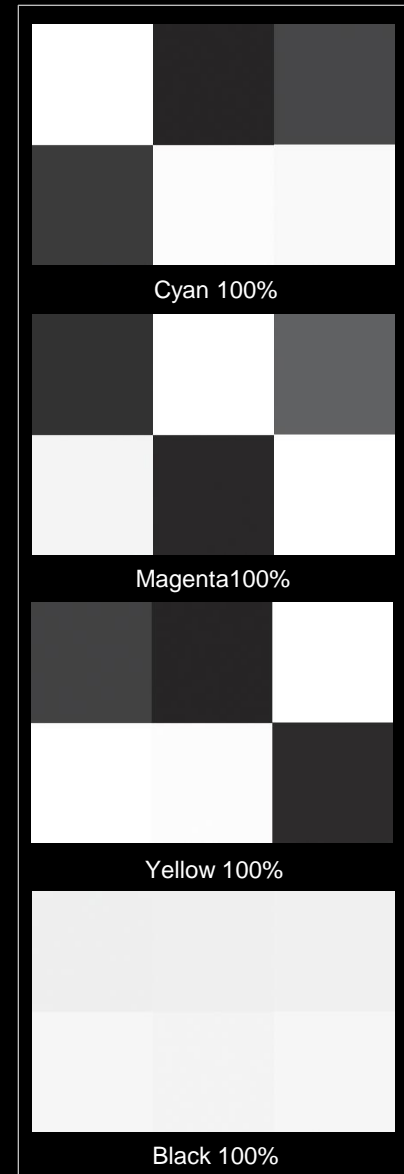
Grayscale / default



Lightness / LAB



RGB



CMYK

# Color → B&W *Channel Conversion*



"Out of camera" / default raw conversion



Grayscale / default



Lightness / LAB



Red 100%



Green 100%



Blue 100%

RGB



Cyan 100%



Magenta 100%



Yellow 100%



Black 100%

CMYK



# Color → B&W *Channel Conversion*

---



Completed image

- Lens distortion correction
- Remove ("clone out") distracting elements
- "Aesthetic" mix of red / orange / yellow / green / cyan / blue / purple / magenta channels
- Local contrast enhancement
- Sharpening ("unsharp mask")
- Add warm duotone

# Color → B&W *Channel Conversion*

---

*As colors are converted to B&W, they become shades of grey;  
Light colors → light tones / highlights ; dark colors → dark tones*



# Converting to Black & White

---

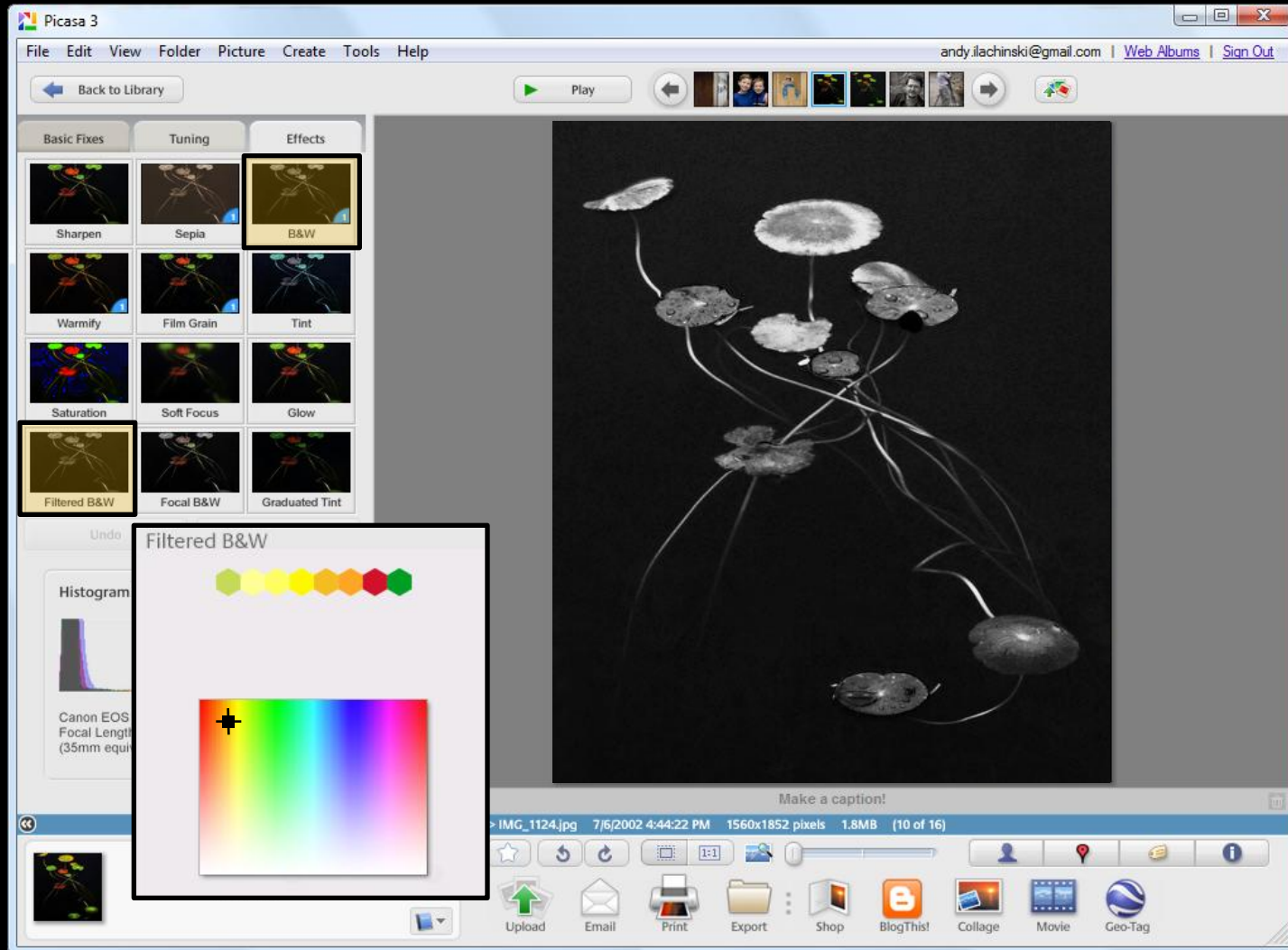
## Conversion options

- In-camera filter (B&W JPEG capture)
- • Stand-alone Color → B&W conversion program
- • JPEG conversion using *iPhoto, Picasa, Photoshop / Elements, ...*
  - Grayscale
  - Desaturation
  - Gradient
  - Channel Mixing (in RGB / CMYK)
  - LAB space
- Raw conversion using Adobe RAW
  - Raw capture (processed for color) and converted in Lightroom or Photoshop
- Raw capture (multiply processed for color); multilayer processed in Photoshop
- • B&W conversion plug-ins

# Converting to Black & White

Stand-alone Program: Google's *Picasa* (v3.8) - Free

Filtered  
B&W

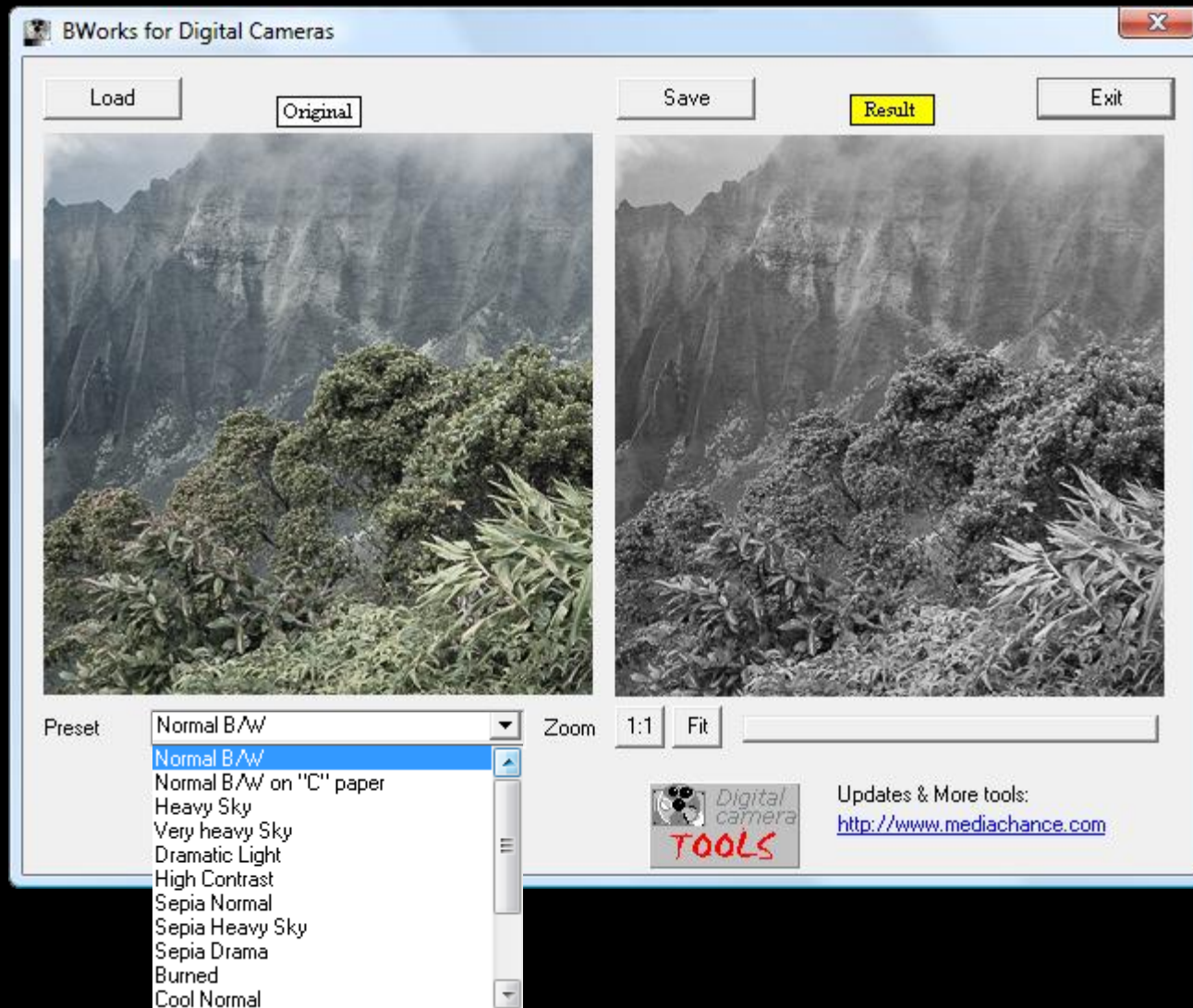


<http://picasa.google.com/>



# Converting to Black & White

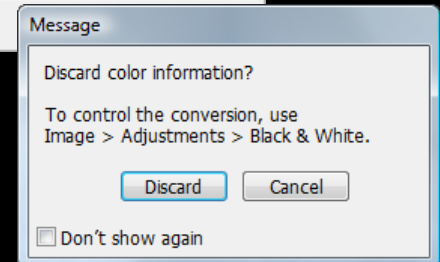
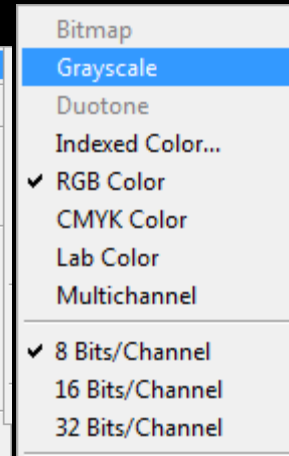
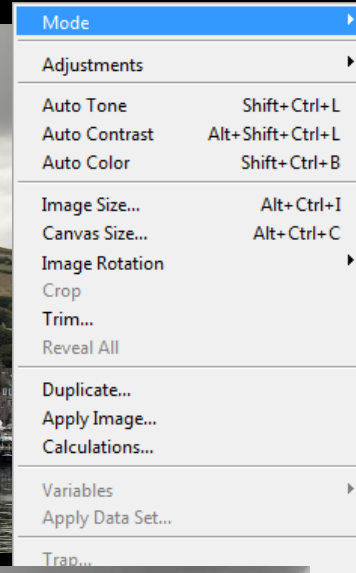
## Stand-alone Program: BWorks (Free)



<http://www.mediachance.com/digicam/bworks.htm>

# Converting to Black & White

## Method 1: *Grayscale*



# Converting to Black & White

## Method 2: *Desaturation*

The image illustrates the process of converting a color photograph to black and white using the desaturation method in Adobe Photoshop. The top half shows the original color image of a coastal town with boats in the harbor. The bottom half shows the same image in grayscale. Overlaid on the top image is the Photoshop 'Layer' menu with 'New Adjustment Layer' > 'Hue/Saturation' selected. To the right, the 'Hue/Saturation' adjustment panel is shown in two states: the top one with 'Default' settings (Saturation at 0) and the bottom one with 'Custom' settings (Saturation at -100). A yellow arrow points from the 'Saturation: -100' value to the bottom image, indicating the result of the adjustment.

**Layer Menu:**

- New
- Duplicate Layer...
- Delete
- Layer Properties...
- Layer Style
- Smart Filter
- New Fill Layer
- New Adjustment Layer
- Layer Content Options...
- Layer Mask
- Vector Mask
- Create Clipping Mask Alt+Ctrl+G
- Smart Objects
  - Type
  - Rasterize
- New Layer Based Slice
- Group Layers Ctrl+G
- Ungroup Layers Shift+Ctrl+G
- Hide Layers
- Arrange
- Align
- Distribute
- Lock All Layers in Group...
- Link Layers
- Select Linked Layers
- Merge Layers Ctrl+E
- Merge Visible Shift+Ctrl+E
- Flatten Image

**Hue/Saturation Panel (Default):**

- Hue: 0
- Saturation: 0
- Lightness: 0

**Hue/Saturation Panel (Custom):**

- Hue: 0
- Saturation: -100
- Lightness: 0

**Result:** The image is converted to black and white, with the text "Saturation = -100" indicating the adjustment made.



# Converting to Black & White

## Method 3: *Gradient Map*

The image illustrates the process of converting a color photograph to black and white using the Gradient Map adjustment layer in Adobe Photoshop. The top half of the image shows the original color photograph of a harbor town. A context menu is open, highlighting the 'Gradient Map...' option. The bottom half of the image shows the same photograph converted to black and white. To the right, the 'Gradient Map' adjustment panel is visible, showing a gradient bar. Below it, the 'Gradient Editor' dialog is open, showing a gradient bar with a white-to-black gradient. The 'Gradient Editor' dialog includes a 'Presets' section, a 'Name' field, a 'Gradient Type' dropdown, a 'Smoothness' slider, and a 'Stops' section with 'Opacity' and 'Location' sliders.

**Gradient Map Adjustment Panel:**

- ADJUSTMENTS MASKS
- Gradient Map
- Dither
- Reverse

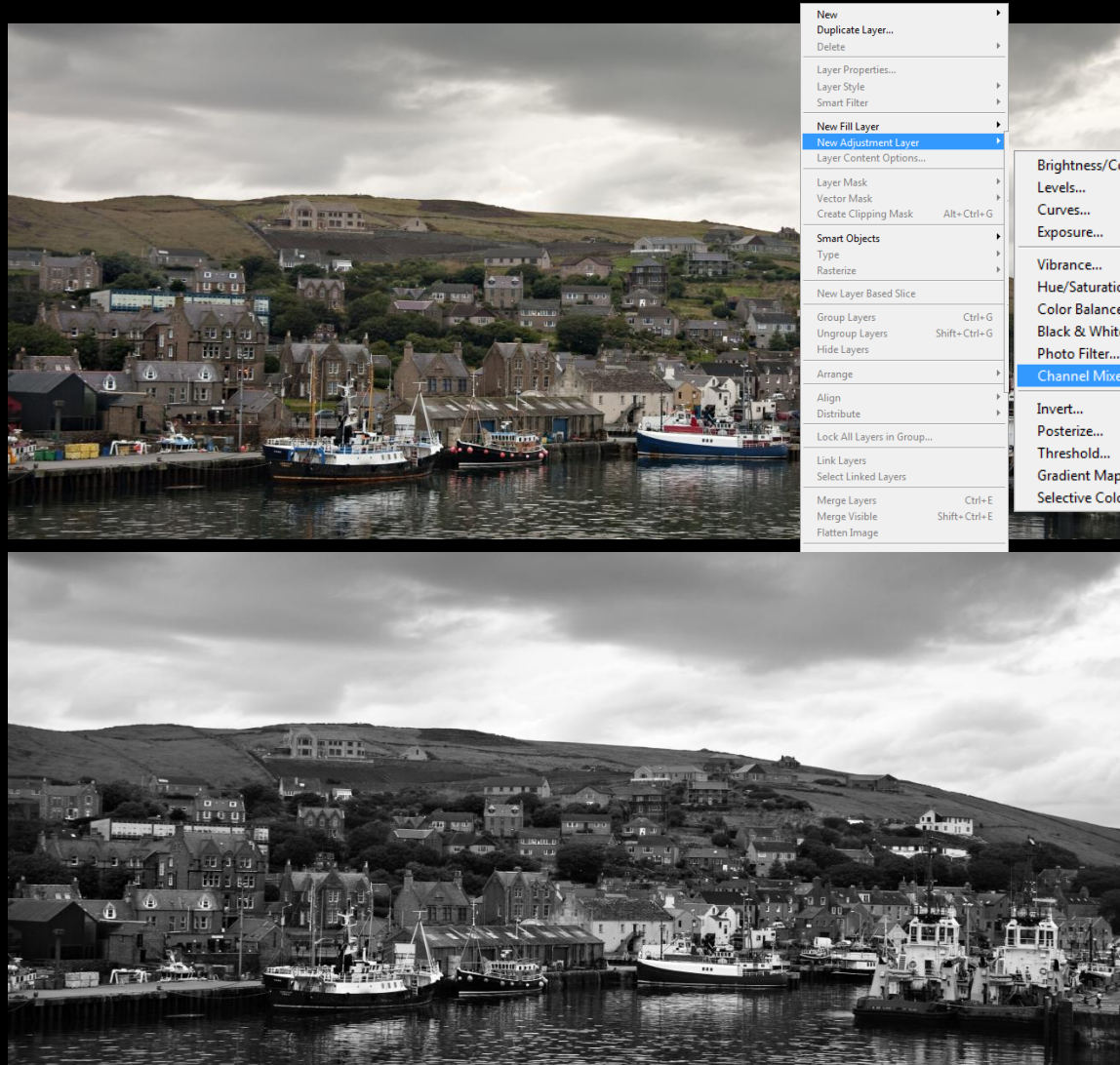
**Gradient Editor Dialog:**

- Presets
- Name: Custom
- Gradient Type: Solid
- Smoothness: 100 %
- lighten → darken
- Stops
- Opacity: % Location: % Delete
- Color: Location: 100 % Delete

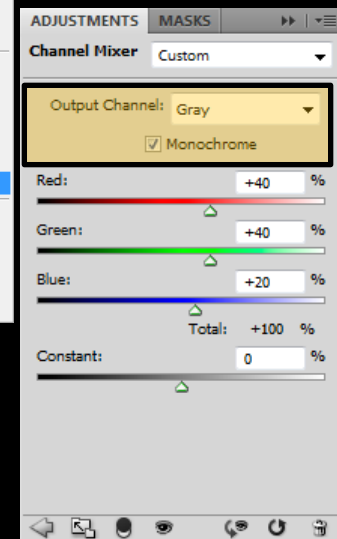


# Converting to Black & White

## Method 4a: *Channel Mixing* (RGB Space)



By default,  
R, G, B → +40, +40, +20

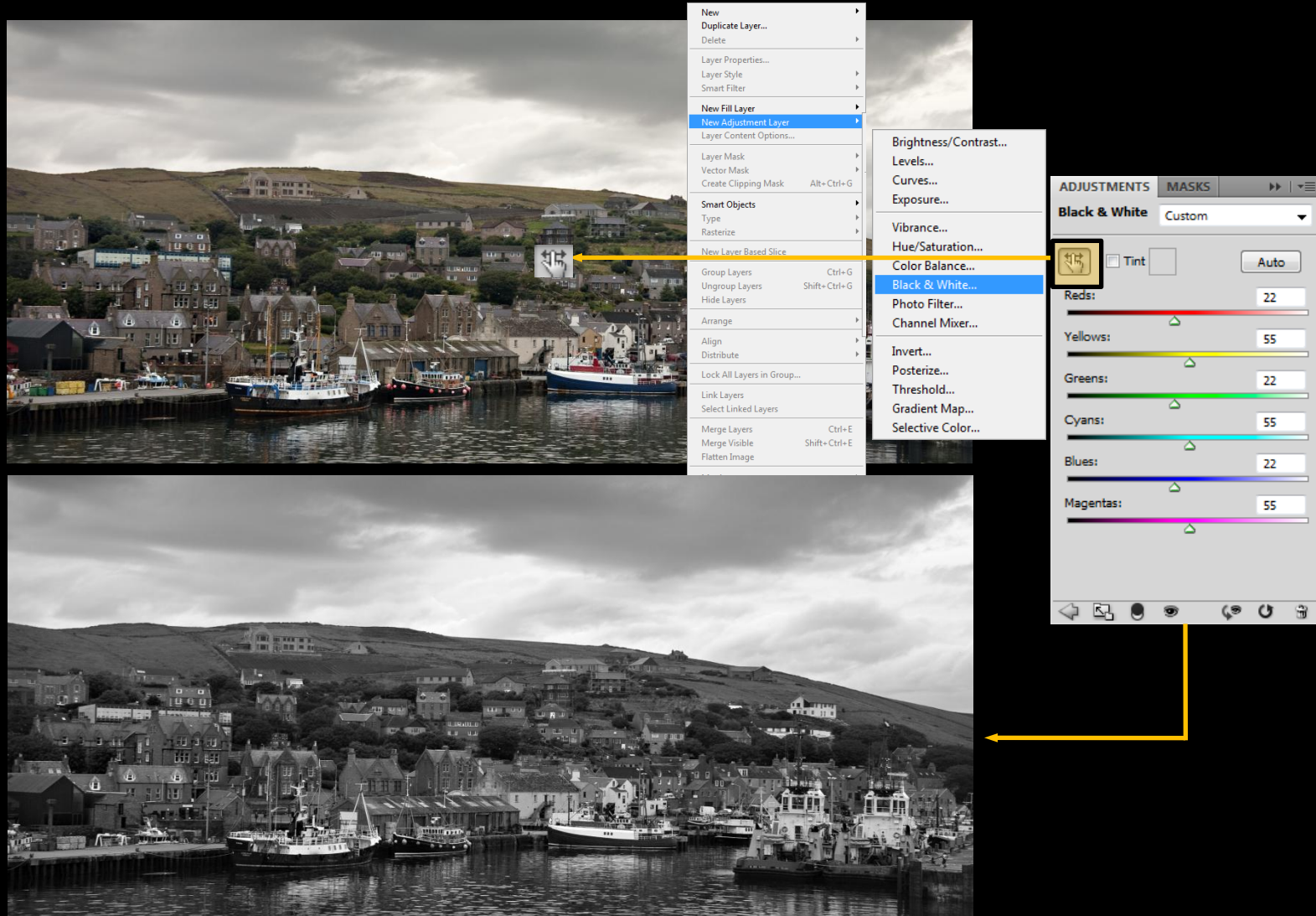


No particular reason for  
(R,G,B) = (+40, +40, +20)  
or  
 $R + G + B = 100$

Adjust so that **you** think  
the image looks good!

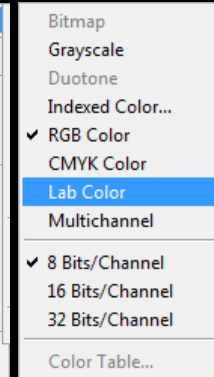
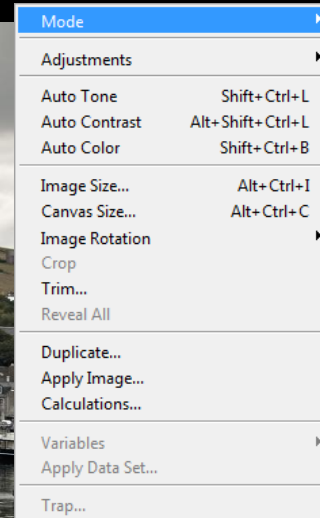
# Converting to Black & White

## Method 4b: Channel Mixing / Black & White

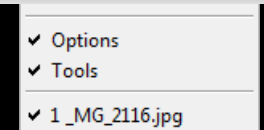
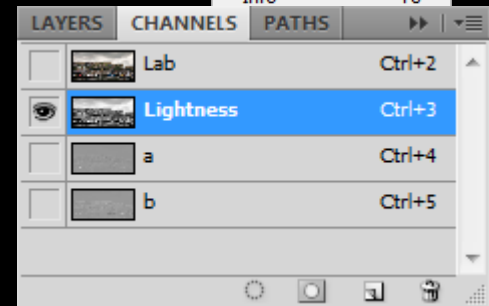
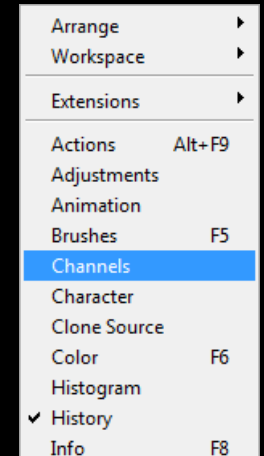


# Converting to Black & White

## Method 5: *Lab Color*



Menu → Windows



Step 1: *Select all* (click Ctrl-A)

Step 2: *Convert back to RGB* (Mode → RGB Color)

Step 3: In channel window, select RED channel  
→ *Paste* (click Ctrl-V)

Step 4: Select GREEN channel → *Paste* (click Ctrl-V)

Step 5: Select BLUE channel → *Paste* (click Ctrl-V)

Step 6: Select top channel (to make all color visible)

*Done!*



# Converting to Black & White

## Plug-in: Colormancer Tint (*Free*)

OK

Cancel

Reset

Save Settings

Load Settings

☐ Show Original



Pre Saturation		0.41
Red Weight		0.2126
Green Weight		0.7152
Blue Weight		0.0722
Tint Strength		0.31
Tint Hue		231.0
Red/Cyan Tone		13.0
Blue/Yellow Tone		63.0
RGB Brightness		0.82
RGB Contrast		10.0
Post Saturation		0.41

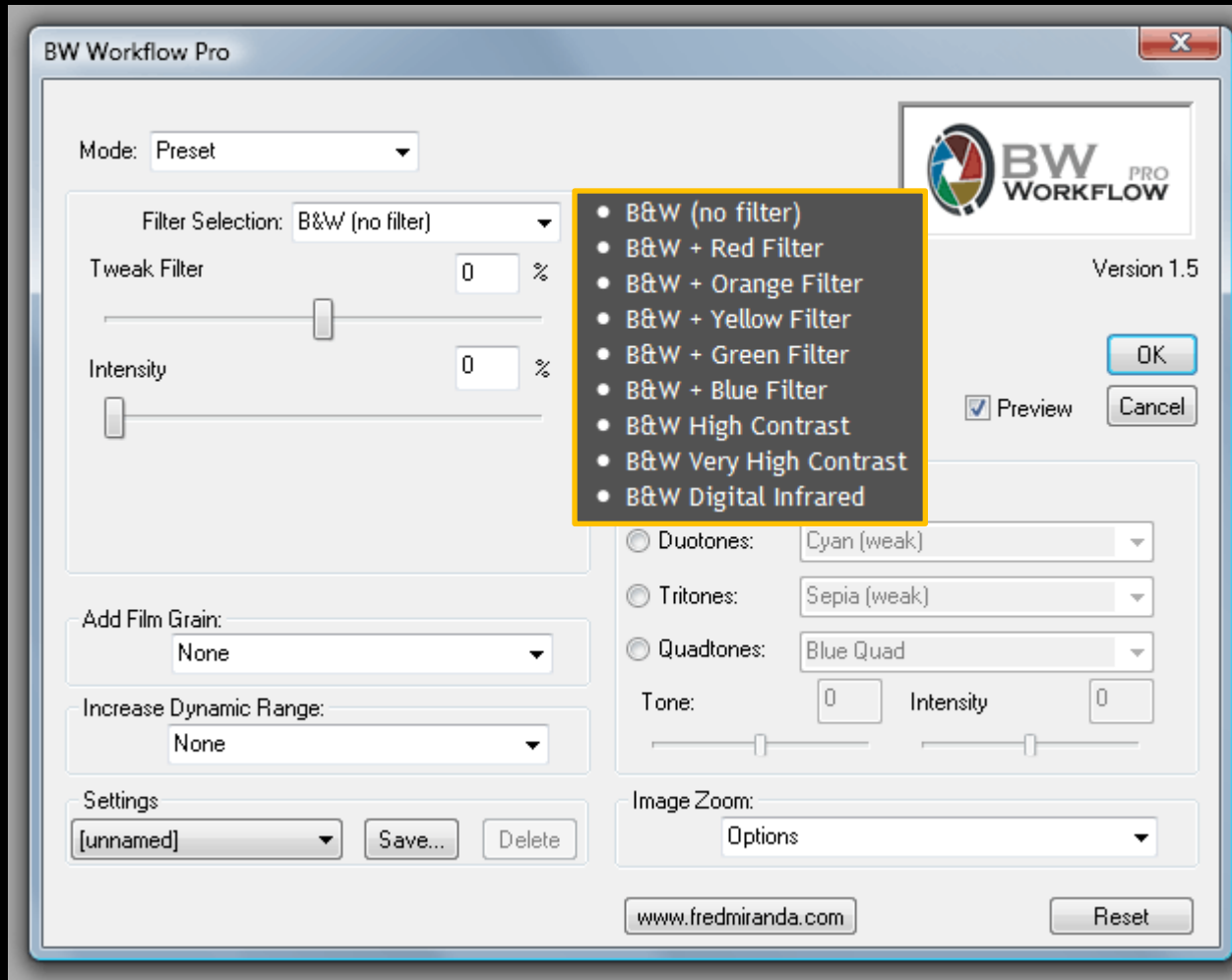
If you have a friend who might find this plugin useful, please let them know about it! Or if you run a website or a blog, please let your visitors know about [free-photoshop-plugins.com](http://free-photoshop-plugins.com)

<http://www.colormancer.ca/free/download-filters/tint-plugin-in.htm>



# Converting to Black & White

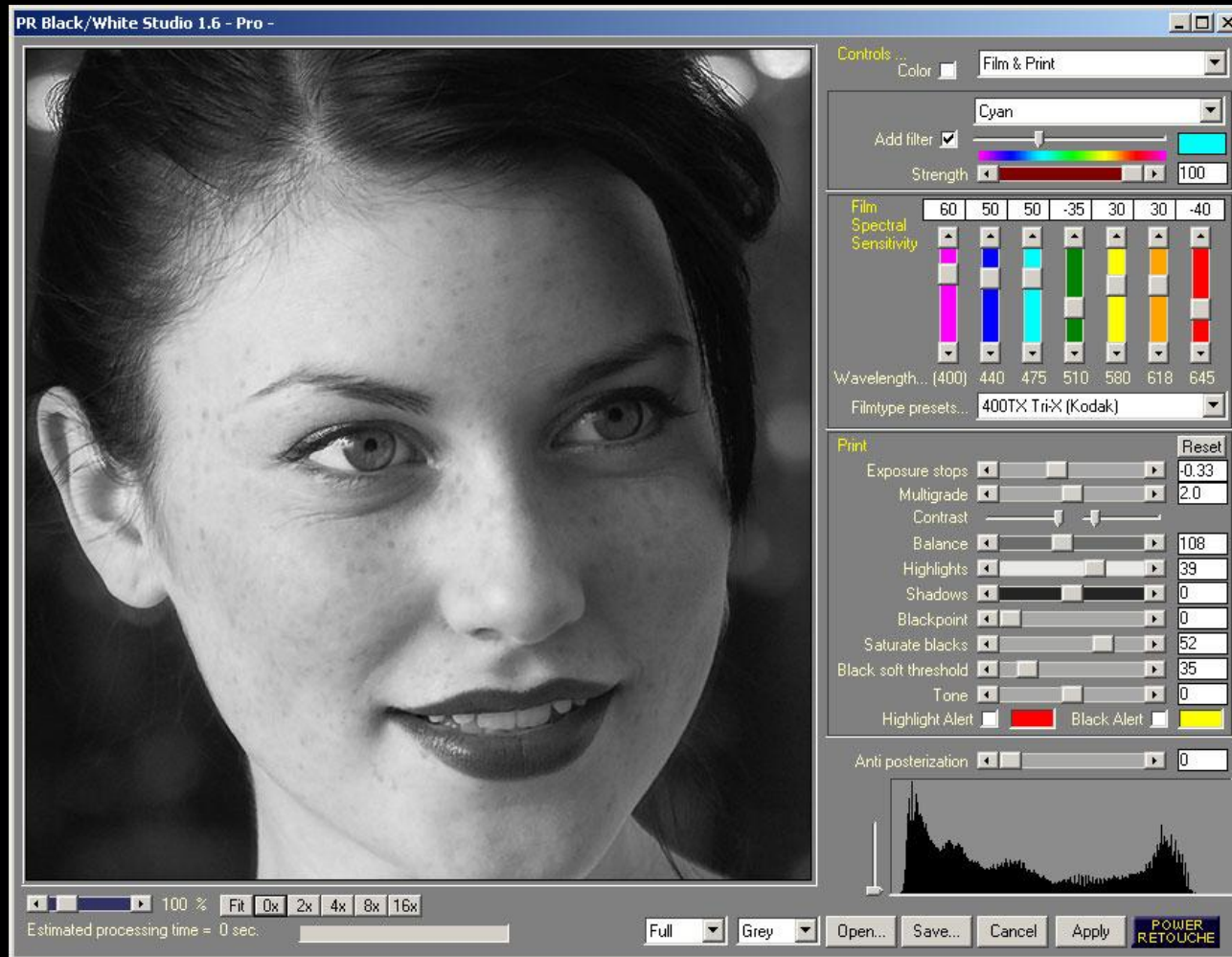
Plug-in: BW Workflow Pro (\$20)



<http://www.fredmiranda.com/DBWpro/>

# Converting to Black & White

## Plug-in: Black and White Studio (\$40)



[http://www.powerretouche.com/Black-white\\_plugin\\_tutorial.htm](http://www.powerretouche.com/Black-white_plugin_tutorial.htm)

# Converting to Black & White

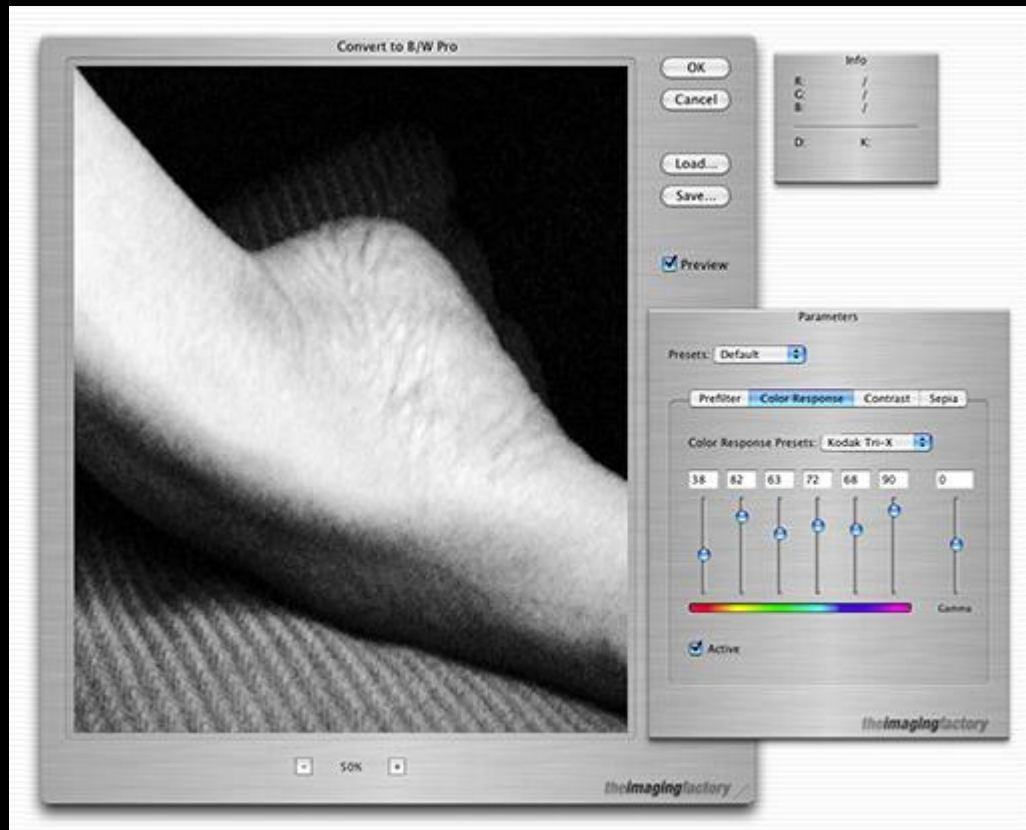
Plug-in: B&W Styler (\$50)



<http://thepluginsite.com/products/photowiz/bwstyler/main.htm>

# Converting to Black & White

Plug-in: ConvertToBW Pro (\$100)



<http://www.theimagingfactory.com/data/pages/info/cbwp/cbwp.htm>



# Converting to Black & White

Plug-in: Nik Silver Efex Pro (\$200)



<http://www.niksoftware.com/silverefexpro/usa/entry.php>

# Outline of Class

---

## Topics

- Who is this guy, and why should I listen to him?
  - And why you *ought not* listen to him
- Photography in six easy steps ;-)
- Fine-art photography
  - A closer look
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  - Some images are best in color; some beg for B&W
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  - What photographers need to keep in mind
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  - Conversion techniques / programs / plug-ins
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- Concluding thoughts :: references
- Extra :: portfolio samples / East vs. West in art / “complexity”

# Learning to *Look*

---

- **Look for simplicity**  
→ Find viewpoint where otherwise cluttered scene appears simpler
- **Don't look for specific photographs**  
→ Focus attention on finding *places that you enjoying looking in*
- **Look for the part that represents the whole**  
→ Find the microcosm that contains the macrocosm
- **Don't wait for the image to come to you... *explore***  
→ Don't be shy about "getting dirty"... get on your knees, climb higher, look down and up and sideways
- **Find ways to express your *experience* of looking**  
→ How do feel as you are wandering around with your camera?
- **Block out distractions**  
→ Embrace a meditative solitude; plug-in favorite music
- **If nothing presents itself, pause, reflect, put down your camera**  
→ Wander around and enjoy the location for what it is

# Taking your photography to the next level

---

- Never stop taking pictures
  - Take photographs... *take more photographs !*
  - Use your mind's eye (when you're without your camera)
- Forget about things and instead focus on processes and feelings
- Never take to heart what others tell you about your work
  - Keep taking the pictures that are important to you
- Spend as much time as you need to learn and internalize technique
  - Then never again allow it to distract you
  - Lose yourself in your pictures



# Taking your photography to the next level

---

- Look at the works of photographers you admire
  - Look everywhere: *book, galleries* (physical and online)
  - Look at the works of photographers you do not admire
- Learn from the traditional masters as well
  - Look at historical paintings, watercolors, and lithographs
  - Take away what is most meaningful to you
- Attend workshops
- Go out with your friends on photo safaris
  - Creativity breeds creativity
- Never be afraid of taking bad photographs
  - Forge your own path
- Be mindful of Louis Pasteur's adage:

*"Chance favors the prepared mind"*

# At first, the *photographer* finds the *picture*...

## Physicist

Light,  
Entropy,  
Geometry

## Poet

Romance,  
History,  
Culture



## Photographer A

Textures,  
Landscape

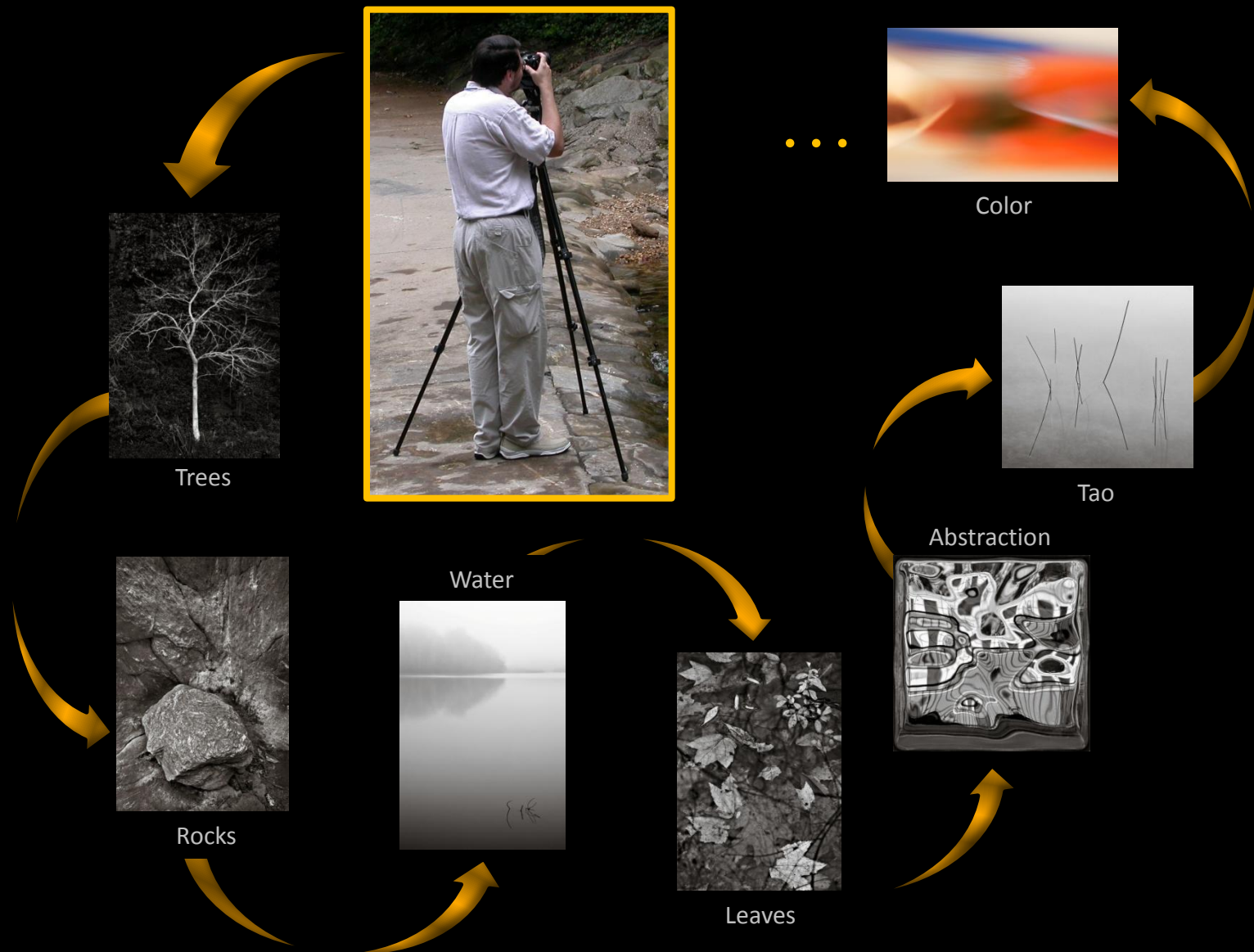
## Photographer B

Dilapidated door,  
Contrast

## Photographer C

Tones,  
Forms

# Then, the *pictures* discover a *path*...



# Eventually, the *path* defines the *photographer*



“Through the years,  
a man peoples a space with images  
of provinces, kingdoms, mountains,  
bays, ships, islands, fishes, rooms,  
tools, stars, horses and people.

Shortly before his death,  
he discovers that the  
patient labyrinth of lines traces  
the image of his own face.”

— Jorge Luis Borges (1899-1986)



# Stages of growth in photography

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Stage 1: Joyful snapshots of anything and everything

→ *First camera, excited about anything & everything*

Stage 2: A passive stirring of aesthetic value

→ *Certain objects draw a deeper attention than others*

Stage 3: Willful engagement of the aesthetic environment

→ *Photographer actively seeks out images of interest*

→ *Both difficult to see "from the outside" and dramatic*

Stage 4: Recognition of the power of expression

→ *Photographer discovers how to express not the object itself, but what draws attention to the object*

Stage 5: One picture is not enough

→ *Photographer begins to see the world as a patchwork; a tapestry of images*

Stage 6: Need to tell a story

→ *Focus on portfolios of interrelated images as elements of narrative*

→ *Interested in telling a story about what the eye (and heart) is drawn to, and why*

Stage 7: Portfolios of Portfolios

→ *Work begins to transcend a "mere" aesthetic impression of the world to an imprint of a deeper aesthetic order of the external world*

→ *Photographer "discovers" the patterns of the world by observing her own work*

**Stage 8: Self-discovery**

→ *Outwardly similar to Stage-7 (to others)*

→ *Inwardly, photographer "discovers" truths about her own soul*

# Outline of Class

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## Topics

- Who is this guy, and why should I listen to him?
  - And why you *ought not* listen to him
- Photography in six easy steps ;-)
- Fine-art photography
  - A closer look
- Color → black & white :: Part 1 - *examples*
  - Some images are best in color; some beg for B&W
- Seeing images
  - Basic elements of design (*form, tone, texture, pattern + light*)
- Camera vs. eye :: *similarities & differences*
  - What photographers need to keep in mind
- Color → black & white :: Part 2 - *doing it for yourself*
  - Conversion techniques / programs / plug-ins
- Moving on to the next level
- **Concluding thoughts :: references**
- Extra :: portfolio samples / East vs. West in art / “complexity”

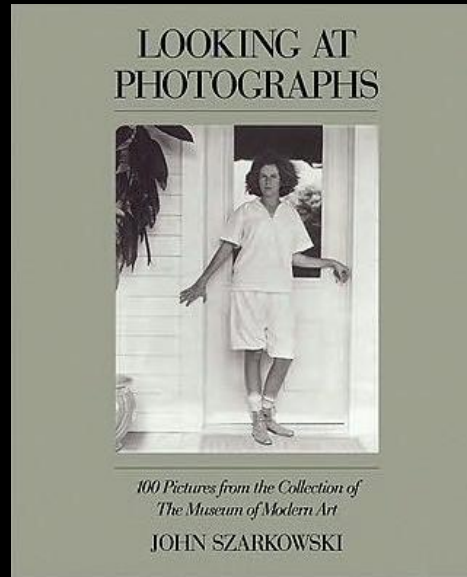
# References

Great photos and commentary on **WHY** they are great

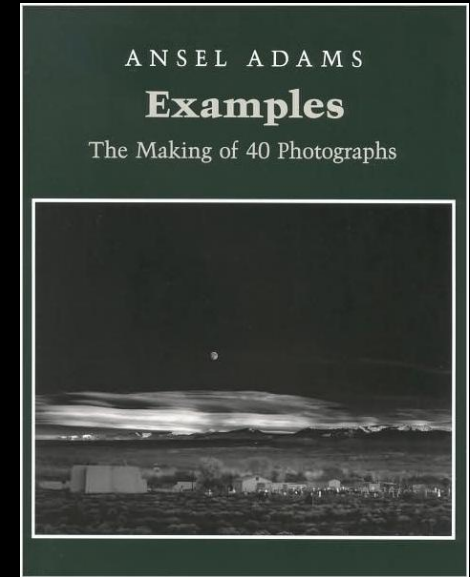
*Run – don't walk – to get this book !*



*Why Photographs Work*  
George Barr



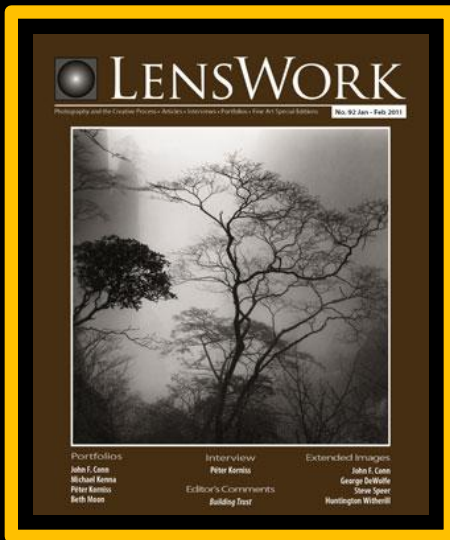
*Looking at  
Photographs*  
John Szarkowski



*Examples*  
Ansel Adams

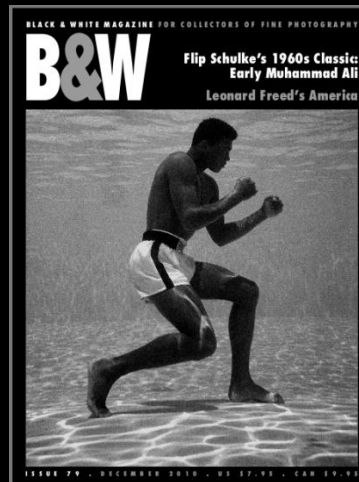
# References

## Black & White Magazines



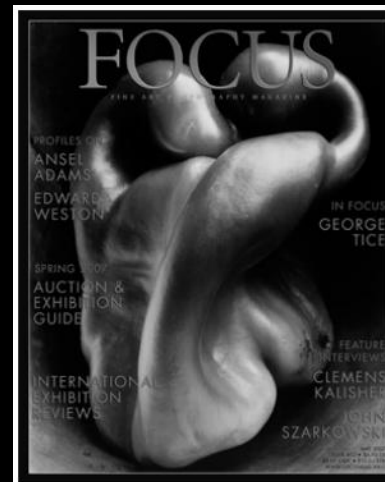
<http://www.lenswork.com>

Subscription only  
Available for iPad / pdf  
\$3.95 / issue



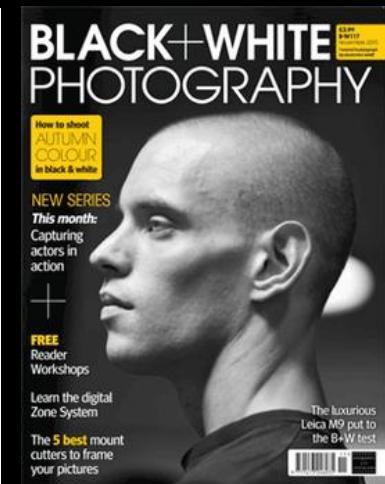
<http://www.bandwmag.com/>

Borders / Barnes & Noble



<http://www.focusmag.info/>

Subscription only  
Available for iPad / pdf  
\$9.95 / issue

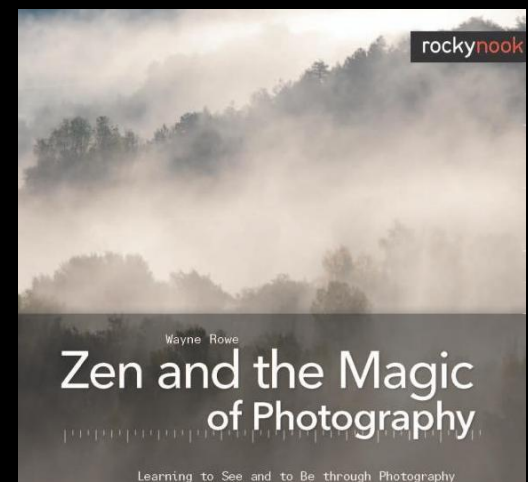
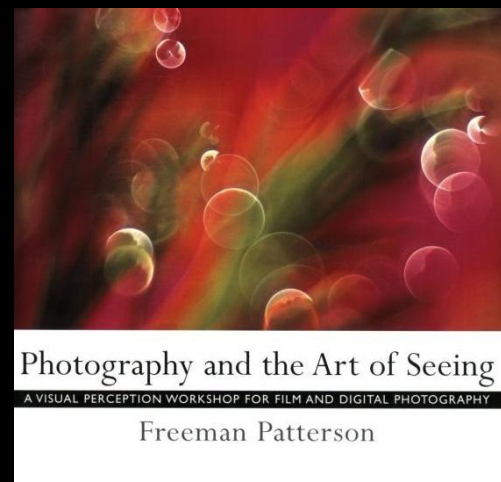
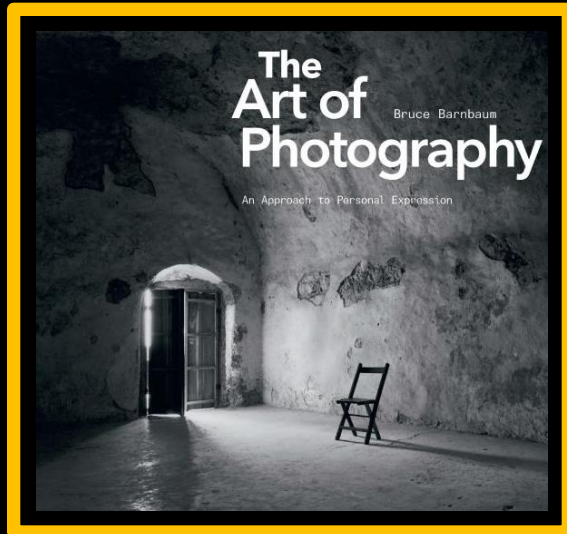
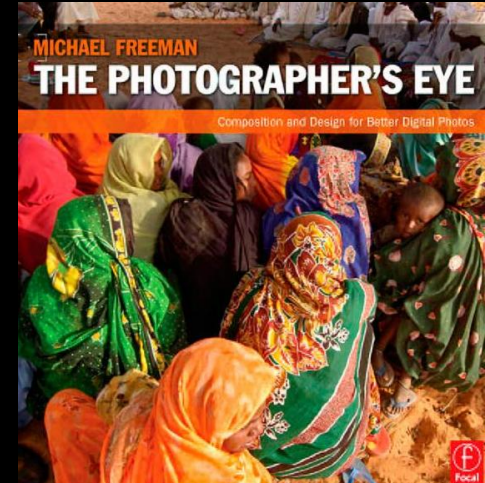
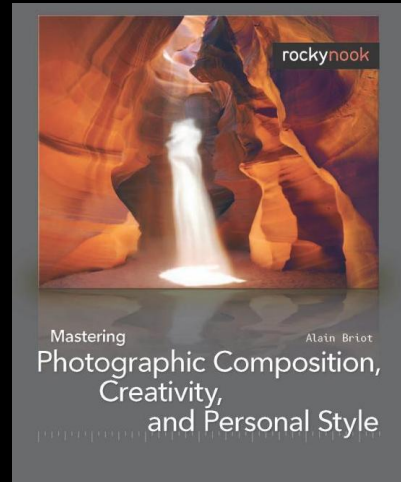
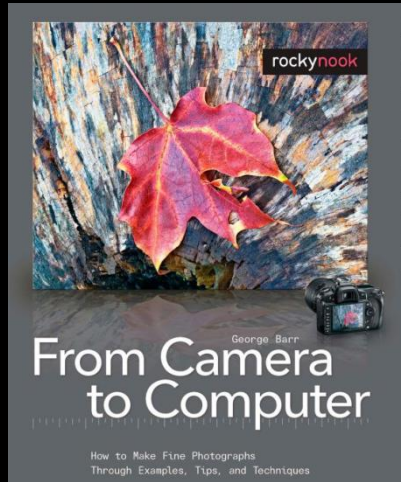


Borders / Barnes & Noble



# References

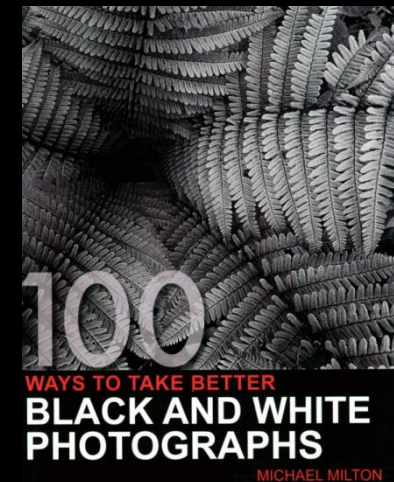
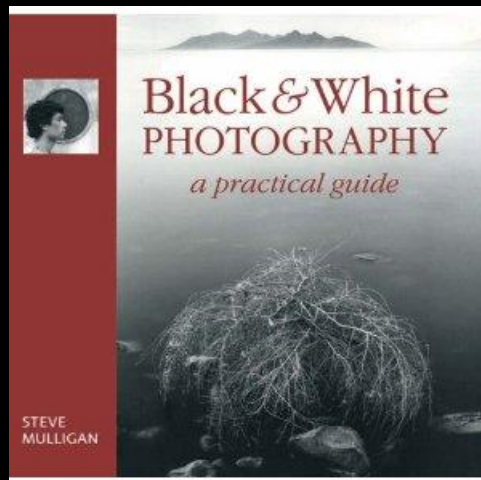
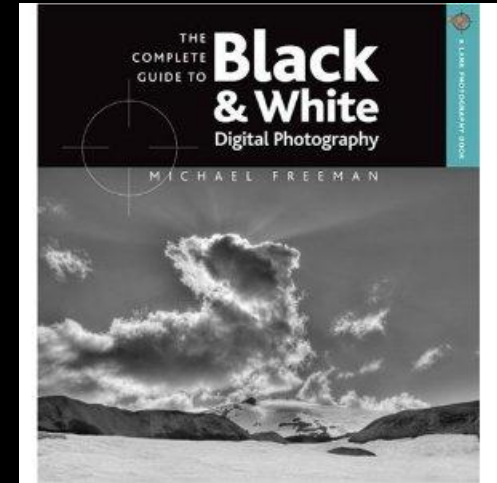
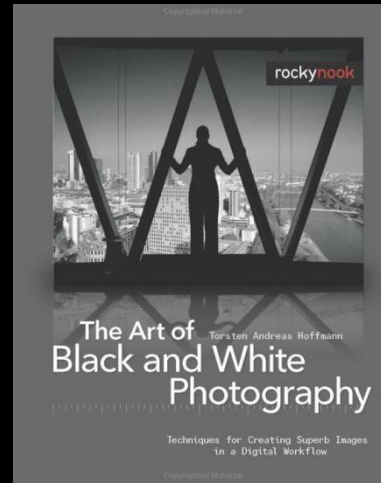
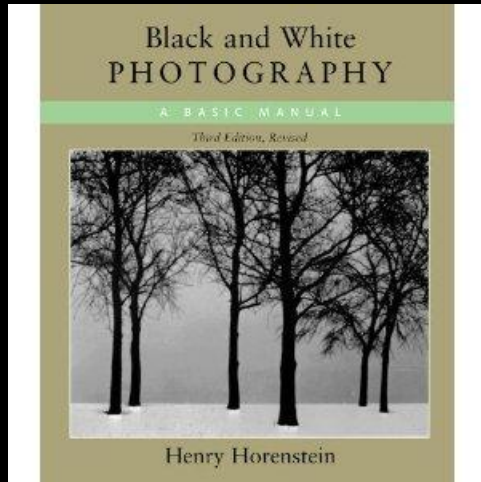
## Books about Fine-Art Photography



↑ One of the best books on the “art” of photography available

# References

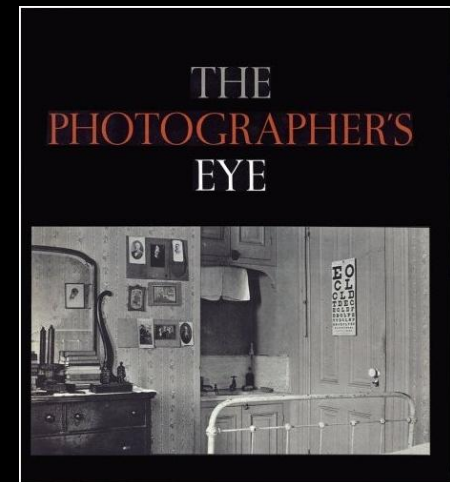
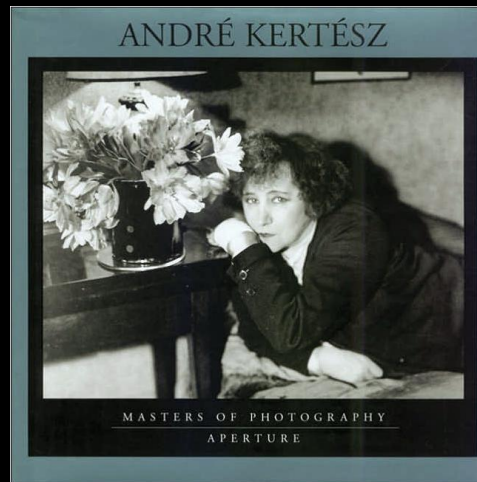
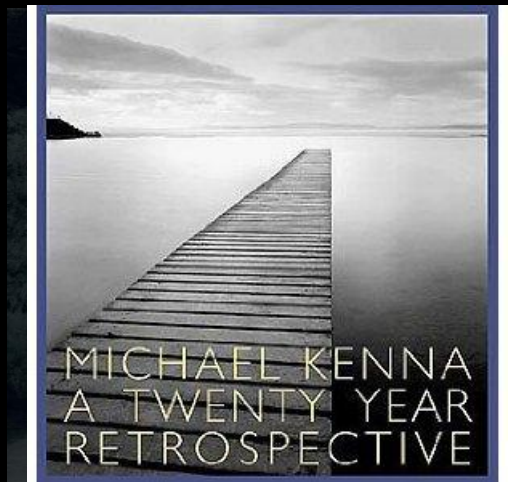
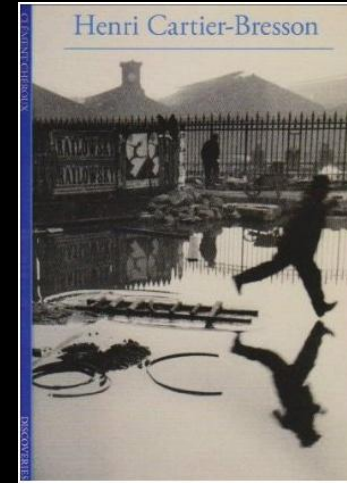
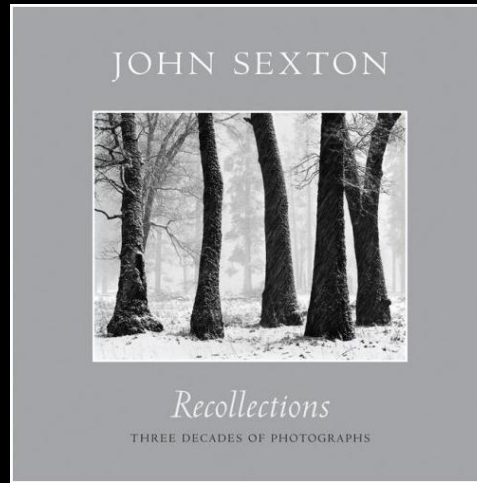
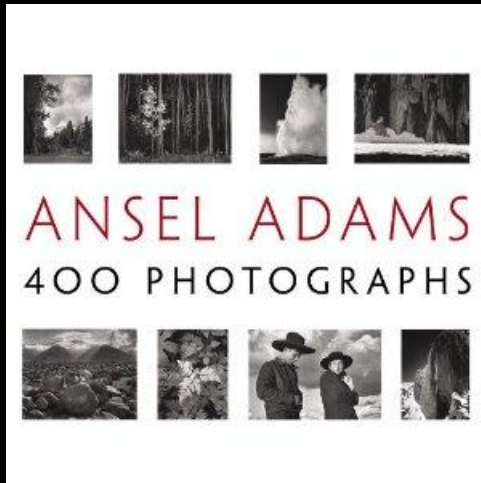
## Books about Black & White Photography





# References

## B&W Fine-Art Photography – Some Masters





“When words become unclear,  
I shall focus with photographs.  
When images become inadequate,  
I shall be content with silence.”

— ANSEL ADAMS



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<http://www.sudden-stillness.com>

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