

Image Analysis & Retouching



We are mediocre photographers

THE MASTERS DO NOT NEED TO RETOUCH. THEY GET PERFECT IMAGES
STRAIGHT OUT OF THE CAMERA.

Moonrise, Hernandez, New Mexico – 1941

Ansel Adams



Print by Ansel Adams – early 1970s

Moonrise – Hernandez New Mexico – 1941

Ansel Adams



Print by Ansel Adams – early 1970s



Contact print of original film

What is retouching?

- ▶ Taking a well composed and captured image and making adjustments to make it stronger
 - ▶ “Get it right in camera” = Capture an image that can be retouched
- ▶ Retouching cannot turn a mediocre image into a great one

Agenda

- ▶ Raw vs JPEG
- ▶ Retouching Workflow
- ▶ Looking for Fatal Flaws
- ▶ Identifying Distractions
- ▶ Work through some examples

Raw vs JPEG

- ▶ JPEG

- ▶ 8-bit

- ▶ $2^8 = 256$ colours per channel;

- ▶ RAW

- ▶ 12-bit (older or lower end cameras)

- ▶ $2^{12} = 4,096$ colours per channel

- ▶ 14-bit (typical for modern cameras)

- ▶ $2^{14} = 16,384$ colours per channel

Overexposed Image



Fixed JPEG



Fixed 12-bit RAW



Editing JPEG vs RAW

- ▶ JPEG image has far less data
- ▶ JPEG is more “fragile”
 - ▶ Can't get as good an edit when compared to raw data
- ▶ Downside of RAW
 - ▶ Raw takes up more storage
 - ▶ Raw requires more skill to use

Workflow

1. Analyse image
 1. Why this image?
 2. Can it be fixed?
 3. What needs to be fixed
2. Fix image
 1. Make global adjustments (Novice)
 2. Make area adjustments (Intermediate)
 3. Make local adjustments (Expert)



Why retouch this image?

Can this image be fixed?

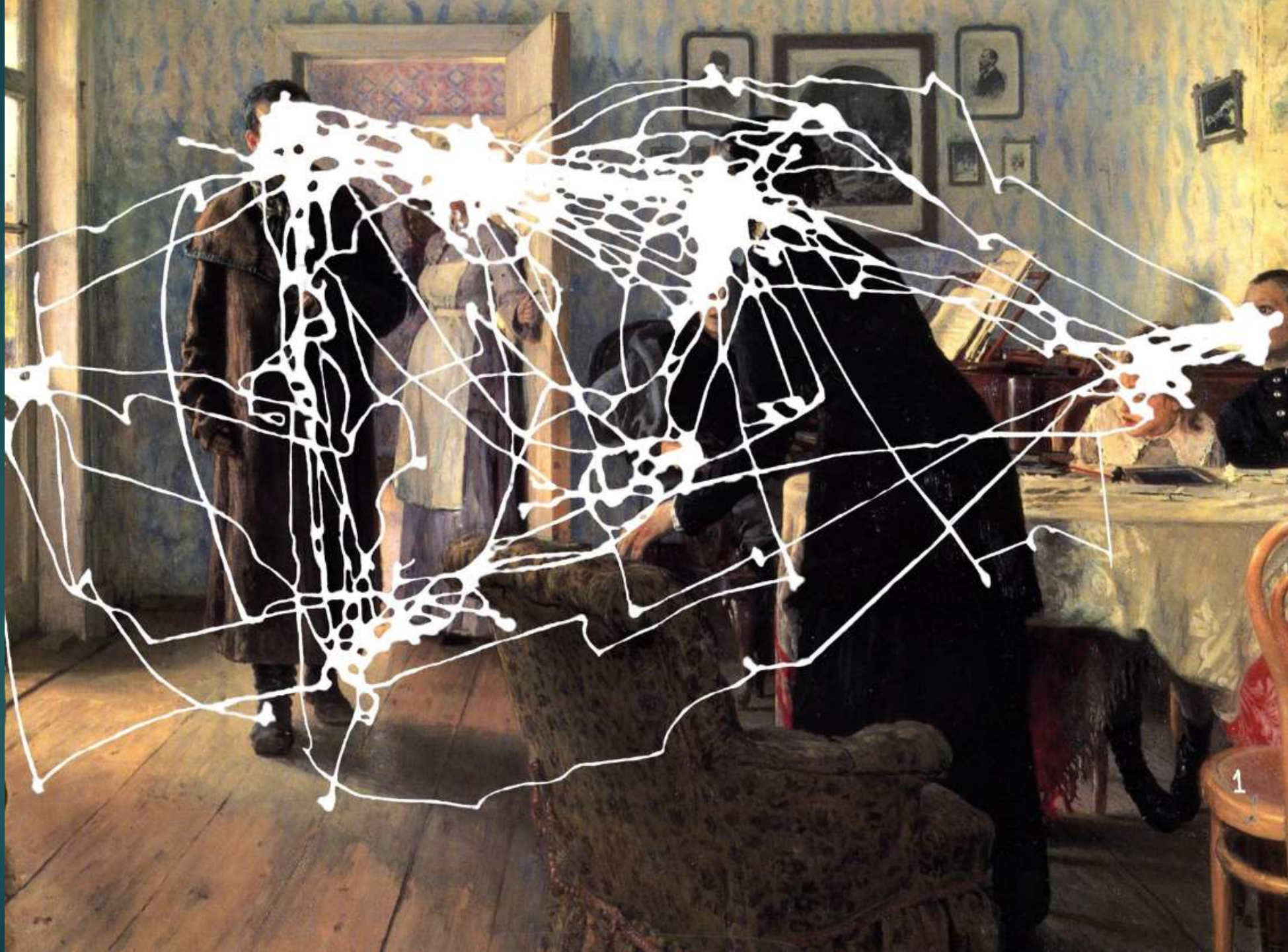
Fatal Flaws

- ▶ Composition not working
 - ▶ Cropping image won't work
 - ▶ Significant distracting element
 - ▶ Distracting background
- ▶ Inadequate sharpness
 - ▶ Camera movement
 - ▶ Shutter speed too slow
 - ▶ Subject / Centre of Interest not in focus
- ▶ Poor light
 - ▶ Poor exposure
 - ▶ Poor light quality
- ▶ Not enough data
 - ▶ Small image file
 - ▶ Clipped highlights and / or Crushed shadows
- ▶ Don't have the skills to fix image

Alfred Yarbus – 1950s







What does the human visual system track?

- ▶ Bright areas
- ▶ Areas of High Contrast
 - ▶ Writing
- ▶ Saturated colours
- ▶ Faces
 - ▶ Eyes

Distractions

- ▶ Image is not level
- ▶ Areas of extreme brightness
- ▶ Areas of high contrast
- ▶ Areas of saturated colours
- ▶ Elements near edge of frame
 - ▶ Elements that cross the edge of the frame
- ▶ Soft foreground
- ▶ Competing “main” subjects
- ▶ Perspective issues
- ▶ Sensor dust / sensor noise

Global Adjustments – Fast / Easy

- ▶ Exposure
- ▶ Contrast
 - ▶ Sharpness / Micro-contrast
- ▶ White balance
- ▶ Straighten image (level horizon)
 - ▶ Perspective correction
- ▶ Crop

Area Adjustments – Fairly fast & easy

- ▶ Background
 - ▶ Sky
- ▶ Foreground
 - ▶ Water / Beach / Road
- ▶ Noise reduction
 - ▶ If required
- ▶ Apply gradations
 - ▶ Use gradients
- ▶ Sharpen / Soften – Areas
- ▶ Open up – Areas
 - ▶ Large areas of trees

Local Adjustments – Takes time & effort

- ▶ Repairs
 - ▶ Sensor dust removal
- ▶ Local exposure
 - ▶ Dodging & Burning
- ▶ Local contrast / micro-contrast adjustments
 - ▶ In-process sharpening
- ▶ Local saturation issues
 - ▶ Usually need to desaturate

Size Matters – Need Data to work with



Large Image



Small Image



Example workflow

Let's work on some images!



And get to this...

